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Pennsylvania
appalachian
development plan

COMMONWEALTH OF PENNSYLVANIA

RAYMOND P. SHAFER Governor

PREPARED BY

THE PENNSYLVANIA STATE PLANNING BOARD

ADVISOR TO

THE SECRETARY OF COMMERCE

THE PENNSYLVANIA STATE MEMBER ON

THE APPALACHIAN REGIONAL COMMISSION

November 1968

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF COMMERCE
HARRISBURG

THE SECRETARY

November 12, 1968

The Executive Committee
The Appalachian Regional Commission
1666 Connecticut Avenue, N. W.
Washington, D. C. 20235

Gentlemen:

I am pleased to submit the Pennsylvania Appalachian Development Plan prepared for the three year period ending June 30, 1971.

This Plan has been prepared by the Pennsylvania State Planning Board with the cooperation of many State agencies and the Local Development Districts to meet the requirements of the Appalachian Regional Commission.

As the State Member, acting on behalf of the Governor, I have approved this Plan and the projects recommended therein.

This Plan will be subject to annual review as a part of the State's continuing planning process, with supplements prepared as appropriate.

Should further information be required in the course of your consideration of this Plan, please be assured of our cooperation.

Sincerely yours,

Clifford L. Jones
State Member

Enclosure

COMMONWEALTH OF PENNSYLVANIA
GOVERNOR'S OFFICE
HARRISBURG
17120

STATE PLANNING BOARD

November 4, 1968

The Honorable Clifford L. Jones
Secretary of Commerce
Harrisburg, Pennsylvania 17120

Dear Secretary Jones:

The State Planning Board is pleased to submit the Pennsylvania Appalachian Development Plan prepared for the three-year period ending June 30, 1971.

The Plan describes Appalachia Pennsylvania; provides information concerning each of its economic activity areas; discusses the employment, manpower, natural resources, public facilities, development strategy, and problems, goals and objectives of each Local Development District; specifies Pennsylvania's economic development policies and Appalachia investment policies; and recommends projects.

The preparation of this Plan was made possible by the cooperation of many State agencies and the Local Development Districts. We express our appreciation for their assistance and counsel.

It also reflects the very fine working relationship between the Department of Commerce and this office and we are pleased to be of service.

Very truly yours,

Irving Hand
Irving Hand
Executive Director

Jack K Busby
Jack K. Busby
Chairman

Enclosure

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SUMMARY

This Development Plan, prepared for submission to the Appalachian Regional Commission, discusses the resources and problems and describes planning and development goals for the 52-county Appalachian section of Pennsylvania. The State is responsible for the submission of a State Appalachian Development Plan which sets forth goals and objectives, identifies problems and potentials, and establishes priorities for spending Appalachian funds. The Plan is necessarily a blend of many factors which have been identified by State and local officials as necessary for rapid economic growth.

In cooperation with seven local development districts (groups of counties which have joined together to plan for their development and improvement), growth potentials have been evaluated, economic and social factors impeding development have been identified, and programs of public investment to develop significant potentials for growth have been proposed. A fundamental concept around which this planning effort revolves is the awareness that funds are limited - that they must therefore be spent where they will have the maximum benefit in creating permanent jobs, higher income levels, and improved living conditions.

The Appalachian Development Plan is considered to be but one element in the Statewide development planning program for Pennsylvania which is in process. The State Planning Board is formulating a Statewide comprehensive development plan (including regional or district development plans) that will deal with a broader array of physical, social, and economic problems than that appropriate under the Appalachian Regional Development Act. The Appalachian Development Plan, however, is an important component of a general plan because Appalachia Pennsylvania includes about three-quarters of the land area and about half the State's population.

The State planning effort in Pennsylvania includes not only traditional procedures in which goals are identified, conditions investigated, and solutions proposed, but also a heavy emphasis on coordination and support of functional departments whose activities may contribute to the economic, social, and physical development of the Commonwealth.

By Executive Directive of the Governor, the Secretary of Commerce serves as the State Member on the Appalachian Regional Commission and is responsible for Appalachian policy development and analysis. The State Planning Board advises the State Member in determining areas in Appalachia Pennsylvania which have a significant potential for growth and where the expected return for the public investments made will be the greatest, in recommending general development priorities, policies and criteria for Appalachia Pennsylvania, and in undertaking research, compiling, and disseminating appropriate data to help Federal, State, and local agencies. The State Member refers project proposals to the Executive Director of the State Planning Board for review and comment.

This Plan report has been prepared to provide a basis for understanding the problems of Appalachia Pennsylvania and for evaluating program and project proposals. It analyzes differences between the 52-county Appalachian area and the 15 non-Appalachian counties in Southeastern Pennsylvania. A separate chapter discusses each local development district. A final chapter reviews the State's strategy for achieving economic development, indicates how Appalachian development planning is part of that framework, presents investment policies, and recommends individual projects for the three year period ending June 30, 1971.

Limited revision of this three year Pennsylvania Appalachian Development Plan will be undertaken as a part of the State's continuing planning process.

The preparation of this Plan began in February, 1968. A meeting was held in Harrisburg of the officials and staff of local development districts to request the districts to:

- Examine economic, social, and environmental conditions and objectives;
- Identify development problems and objectives;
- Evaluate the development potential, given the existing resource base;
- Propose a development strategy;
- Prepare a list of projects for development.

Teams which included staff of the State Planning Board and the Department of Commerce made field trips to guide and assist the local development districts. This field work was completed in April. The local development districts prepared and submitted reports to the State Planning Board staff. The staff analyzed these reports, and collected other data needed for the Plan report. Projects were reviewed.

The Secretary of Commerce met with State Planning Board staff members to agree upon the Pennsylvania planning and development policies for Appalachia and the projects to be recommended in the Plan report. On July 11, 1968, the State Planning Board reviewed and approved the policies and the projects.

The Pennsylvania policy toward economic development has two clear thrusts - training workers and attracting manufacturers - and a recently added third broad one,with several objectives,which might be summed up as "balanced economy".

Following this general policy, Appalachian funds are recommended by the State Member for projects that are industry-related. Where an employment potential with a sizeable payroll is possible, strong consideration will be given.

Administrative procedures established by the Department of Commerce require that projects be approved by the operating department of State government responsible for the kind of facility requested. This requirement insures the highest level of coordination between localities making requests, the Commonwealth agencies with statutory jurisdiction concerning them, and the State Member.

Project priorities for the Pennsylvania Appalachian Development Plan are:

- Access roads to economic development sites;
- Vocational-technical schools;
- Airports which will serve an industrial, distribution, or tourist development complex;
- Mine area reclamation projects including the elimination of mine fires and subsidence danger, strip mine and waste pile reclamation, and sealing abandoned oil and gas wells;
- Sewage treatment plants where economic development benefits can be shown;
- Higher education facilities for science oriented research, science, engineering, teacher training and medical personnel training;
- Hospital facilities, especially those for nurses' training or vocational rehabilitation or when necessary for the overall economic development of the area;
- Educational television that is part of the Statewide network;
- Audio-visual regional instructional materials centers;
- Housing improvement;
- Water supply projects needed for economic development.

Individual projects recommended to the Appalachian Regional Commission for funding over the three year period ending June 30, 1971, are listed for each local development district. In many cases, cost estimates have yet to be prepared by local officials. Therefore, the total cost of implementing the plan cannot now be stated. In addition, water resource development projects recommended in the Pennsylvania State Water Resources Supplement are included in the recommendations submitted to the Appalachian Regional Commission.

All projects to be undertaken utilizing Appalachian funds will be subject to further individual evaluation as they receive specific consideration. Consistency with the Development Plan will be a prime factor. The Plan will continue to be reviewed annually and appropriate supplements prepared up-dating its substance and proposed projects.

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

NORTHWEST DISTRICT

Construct vocational-technical school to serve Warren County

Construct mental health facilities at Hamot Hospital, Erie

Construct additional facilities at St. Francis Hospital, New Castle

Construct facilities for Vallonia Industries (Crawford County Sheltered Workshop), Meadville

Construct new airport to serve Clarion County

Construct extension to runway at Meadville airport

Construct laboratory or research center at Clarion State College

Construct science and industry research center in Erie under a consortium of the colleges, universities, and industries in the area

Construct access roads and site development work to serve the new and expanded port and pier facilities in Erie

Construct access roads to serve the Barrett Flats industrial area in Franklin, the Tionesta recreation areas, an industrial and research park in Erie, the New Bethlehem industrial area in Clarion County, and possible projects in Lawrence and Mercer Counties

Construct Section 221 housing in Erie (2 projects), New Castle, and Warren

Improve the water supply for Erie

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

TURNPIKE DISTRICT

Construct extension to Meyersdale Community Hospital

Construct extension to Bedford Memorial Hospital

Construct new airport at Bedford

Construct multipurpose building for the Altoona Campus, The Pennsylvania State University

Undertake strip mine reclamation project at the Bellwood Borough reservoir and watershed area

Construct vocational-technical school to serve northern Cambria County

Construct access roads for Meadowgrounds recreation area in Fulton County and Raystown recreation area in Huntingdon County

Construct Section 221 housing in Altoona and Johnstown

Develop industrial park sites at Tipton, Johnstown, Bedford, Somerset, Broad Top area, and Huntingdon

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

NORTHERN TIER DISTRICT

Construct vocational-technical school, Towanda

Improve Memorial Hospital of Towanda, Towanda

Construct educational television "booster" system to extend reception to areas not now served and to become a part of the proposed Statewide educational television network

Construct sewage treatment facilities, Mansfield

Develop a medical center, Sullivan County

Complete access road and site development (water and sewage facilities) for resort development, Sullivan County

Undertake industrial park development, Sayre-Athens area

Expand audio-visual library at Mansfield State College to provide more and better service to school districts

Construct airport in the Sayre-Athens-Towanda or Tunkhannock areas

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

NORTHEAST DISTRICT

Undertake mine subsidence flushing projects in Scranton City; Oxford, Hill, and Green Ridge sections

Undertake strip mine reclamation project in Wilkes-Barre City; Parsons and Miners Mills sections

Undertake mine fire control project at Pottsville City - Peach Mountain

Undertake strip mine restoration projects at Scranton, Pottsville, and Hazleton

Undertake strip mine restoration at Storrs property in Dickson City to create industrial park area

Acquire additional land at Promoff site in Scranton and develop it as an industrial park

Construct access road and/or site development for Ashland coal mine museum

Construct access road and/or site development for industrial parks in Hazleton, Mahanoy City, Wilkes-Barre, Scranton, Pottsville, Tamaqua, Jim Thorpe, Nesquehoning, and Stroudsburg

Construct access road at Scranton campus of The Pennsylvania State University

Construct access roads to serve new tourist development facilities

Construct educational television "booster" system to extend reception to areas not now served and to become a part of the proposed Statewide educational television network

Construct access road and/or site development at Eckley for the "Molly Maguires" film site

Construct vocational-technical schools in Lackawanna County (2), Luzerne County, and Monroe County

Construct runway extension at Mount Pocono Airport

Construct classroom or science facility at either the Hazleton Campus or Wilkes-Barre Campus of The Pennsylvania State University

Construct academic center (classrooms) at Kings College in Wilkes-Barre

Construct a science and engineering research center for all the colleges, universities, and industries in the Scranton/Wilkes-Barre, Hazleton, Pottsville area

Construct facility for the Institute of Physical Medicine and Rehabilitation (Allied Services for the Handicapped) in Scranton

Improve the Carbondale General Hospital

Construct facility for St. Stanislaus Institute in Nanticoke

Construct Section 221 housing in Scranton (2 sponsors for 2 projects), Wilkes-Barre, East Stroudsburg, and Shenandoah

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE THREE YEAR PERIOD ENDING JUNE 30, 1971

SOUTHWEST DISTRICT

Construct vocational-technical schools in Washington County (2), Westmoreland County (3), Northern Fayette County, Allegheny County Steel Valley, and Beaver County

Construct facility for Mon-Valley United Services, Inc.

Construct vocational-rehabilitation facility for Home for Crippled Children in Pittsburgh

Construct laboratory and classroom building at the Greensburg Campus, University of Pittsburgh

Construct a research center in the Pittsburgh area for transportation, pollution, materials, and new fields of science

Construct runway extension at the Latrobe-Westmoreland Airport

Construct facilities at J. S. Thompson Memorial Airport, Rostraver Township, Westmoreland County

Construct improvements at the Connellsville Airport, Fayette County

Construct access roads and complete site development for industrial parks in Fayette County (2), Greene County, Washington City, Donora, Westmoreland County (2), upper Beaver County, Allegheny County (RIDC and Westinghouse Atomic Research Plant), Armstrong County, and Pittsburgh (BJD)

Construct access roads and complete other site development for the Great Meadows Amphitheater and for Ohiopyle State Park, Fayette County, as needed

Undertake strip mine restoration projects at White Oak Borough, Allegheny County, and Burgettstown, Washington County

Undertake mine subsidence project in South Pittsburgh, Allegheny County

Undertake mine fire control projects at Iselin (Indiana County), Harmer Township (Allegheny County), Graham Boulevard, Penn Hills Township (Allegheny County), and Lockview Street, Monessen (Westmoreland County)

Construct Section 221 housing in Pittsburgh (3 sponsors for 3 projects)

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE THREE YEAR PERIOD ENDING JUNE 30, 1971

CENTRAL SUSQUEHANNA DISTRICT

Construct new facilities at the Geisinger Medical Center in Danville

Improve the Renovo Hospital

Construct vocational-technical schools in Northumberland County (Shamokin-Mt. Carmel area and Snyder-Union-Northumberland area) and Lock Haven, Clinton County

Construct access roads and/or site development for Glen Burn (Shamokin) coal mine museum

Construct access roads and/or site development for the Denholm Industrial Park site at Mifflintown, for industrial park sites at Shamokin, Milton, Sunbury, Lewistown, Williamsport, and Bloomsburg, and for a proposed "research park" in Centre County

Construct access road to serve Blanchard Dam recreation area

Construct science or engineering facility at Bucknell University related to industrial training

Construct or extend airport facilities to serve Milton-Lewisburg and Bloomsburg areas

Expand the sewage treatment plant at Mifflintown to serve industries and enlarged high school

Construct additional studios and other facilities for WPSX, the educational television station at The Pennsylvania State University

Undertake mine fire control project at Coal Run, Northumberland County

Construct Section 221 housing in Lock Haven

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN
RECOMMENDED PROJECTS FOR THE THREE YEAR PERIOD ENDING JUNE 30, 1971

NORTH CENTRAL DISTRICT

Construct classroom building at the Bradford Campus of the University of Pittsburgh

Construct aircraft landing strip at Quehanna

Construct vocational-technical schools in McKean County and in Cameron-Elk Counties

Construct addition to Clearfield Hospital

Construct access roads, and water and sewer lines, to serve industrial parks near Brookville, Bradford, Philipsburg, DuBois, Ridgway-Saint Marys-Johnsonburg, the Wolf Lick Interchange (Clearfield), and the Otocsin recreation area

Improve the water supply in Saint Marys

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED WATER RESOURCES PROJECTS

JANUARY, 1968

Emergency Project

A. Lackawanna River and Susquehanna River Mine Drainage Abatement, Subsidence Prevention and Flood Protection

Abatement of mine drainage pollution (pumps, treatment works, land reclamation, and restoration), mine flushing and grouting.

Estimated cost: $68.2 million.

Top Priority Projects

B. Sewickley Creek Watershed - Flood Protection and Water Supply

Retarding structures on streams and channel improvement to provide floodwater protection and industrial water supply for industries between Greensburg and Youngwood. (P.L. #566 Project)

Estimated cost: $3,528,800.

C. Otocsin Reservoir and Recreation Area

Construction of reservoir in major tourist and recreation area; undertaking of project to be coordinated with City of DuBois by the Department of Forests and Waters.

Estimated cost: $29 million including private investment.
Reservoir public investment $3 million.

D. Sechler's Run Flood Protection

Flood control project on Sechler's Run; to protect industrial and commercial areas of Danville.

Estimated cost: $1,150,000.

E. Clarion River Basin Mine Drainage Abatement

Mine drainage abatement work in the Clarion River Basin, to restore water quality in Clarion River and its major tributaries,

Estimated cost: $60 million.

F. Cassleman River Mine Drainage Abatement

1. Abatement of mine drainage to restore fish and acquatic life in the Casselman and Youghiogheny Rivers and to protect the recreational use of Ohiopyle State Park, the first step toward the complete abatement of mine drainage in the Youghiogheny River Basin.

Estimated cost: $5 to 7 million.

2. Further locational and engineering study of the U. S. Army Corps of Engineers, proposed multi-purpose reservoir, Upper Casselman River.

G. Upper West Branch Susquehanna River Mine Drainage Abatement

Corrective work to protect the water quality of the Curwensville Reservoir and a first step towards complete abatement of mine drainage in the West Branch Basin.

Estimated cost: $7.7 million.

H. Connoquenessing Creek Watershed - Flood Control, Water Supply, Recreation

Flood prevention, water supply and recreation project; to benefit West Central Butler County, including Butler and Zelienople. (P.L. #566 Project)

Estimated cost: $14,637,300.

I. Raccoon Creek Reservoir

U. S. Army Corps of Engineers multi-purpose reservoir, adjacent to Raccoon Creek State Park; flood control, water quality, water supply, recreation.

Estimated cost, including acid stream and strip mine reclamation: $35 million.

J. Port of Erie Dredging

Dredging of West Bay Area and proper disposal of dredged material.

Estimated cost: $2 million.

K. Naturealm Conservation - Education Area

Development of water-related improvements and facilities at an existing reservoir; to provide a conservation education area.

Estimated cost: $9.5 million.

L. Abrahams Creek Flood Protection

Local flood protection; levee and channel improvements to alleviate flooding of industrial and commercial areas in Wyoming and West Wyoming in Luzerne County.

Estimated cost: $500,000.

M. Sam's Run Flood Protection

Repair and extension of channel improvements on Sam's Run in Johnstown and Lorain Borough; to protect residential and industrial areas.

Estimated cost: $320,000.

N. Big Sandy Creek Reservoir

U. S. Army Corps of Engineers multi-purpose reservoir; final location and design of project to be coordinated between the Corps of Engineers and the Department of Forests and Waters.

Estimated cost; including recreation facilities: $25 million.

O. Upper Loyalhanna Creek Watershed - Flood Control, Water Supply, Recreation

Flood control, recreation and water supply project; to benefit Eastern Westmoreland County, including Ligonier-Latrobe area. (P.L. #566 Project)

Estimated cost: $7,621,400.

P. Tioga-Hammond Reservoir and Mine Drainage Abatement

U. S. Army Corps of Engineers reservoir project, flood control and recreation purposes; project already authorized; acceleration urgent. Also, abatement of mine drainage pollution in watershed is needed.

Estimated cost:		
	reservoir construction:	$57.5 million
	pollution abatement:	7.25 million

Q. Stony Creek Watershed - Flood Control and Recreation

Flood control and recreation project to benefit Hooversville and Blough communities, alleviate annually recurring damage to railroad facilities. (P.L. #566 Project)

Estimated cost: $7,851,260.

Study Projects

R. Further study of the construction of a multi-purpose reservoir proposed by the U. S. Army Corps of Engineers, on the Clarion River, near Saint Petersburg in Clarion County, including the consideration of the total impact and effect of this reservoir.

S. Study of the proposed reservoir and recreation facility, U. S. Army Corps of Engineers, on Wapwallopen Creek in Luzerne County.

T. Study of the proposed reservoir and recreation facility, U. S. Army Corps of Engineers, on Meshoppen Creek in Wyoming County.

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED RESEARCH PROJECTS

The consideration of research projects to be undertaken will include the following recommended list:

1. Travel Investment Opportunities in Pennsylvania -

Study travel investment opportunities in the following selected areas in Pennsylvania: Otocsin - Clearfield County; Kinzua Dam and Allegheny National Forest - Warren and Forest Counties; Black Moshannon State Park, Blanchard Reservoir - Centre County; Ohiopyle, Great Meadows - Fayette County; Moraine Reservoir, Shenango Reservoir - Butler and Mercer Counties; Prince Gallitzin State Park - Cambria County. The report will include; location information; specific site data; development concepts, ideas and proposals; incentives and available financing; investment opportunities and potential earnings; and specific recommendations regarding changes in State policies or procedures which prospective investors indicate might create a more favorable climate for investment.

2. Investment Guide to Private Recreational Development in Northeastern Pennsylvania -

Develop recommendations for private investments in the recreation industry in northeastern Pennsylvania. The recommendations will assist in the stimulation of private investment and economic development activities and will serve as a guide to public policy development. Previous research has shown that the existing resources and the economic base of northeastern Pennsylvania are conducive to the development of many tourist and recreation facilities. If travel investors and those in public policy decision-making positions are provided data which show in detail that their investments would be highly productive and profitable, this development program would favorably affect the overall growth of the region's economy.

3. The "Brain Drain" -

There is evidence that the number of better educated persons is growing more slowly in Appalachia Pennsylvania than elsewhere in the State and in the Nation. The study will determine where these relative losses are occurring and in what occupational groups the lag is greatest.

4. The Service Industry -

The service industry category includes a fairly wide cross section of workers, some of whom perform menial tasks and receive low pay while others such as teachers are also included but receive much higher wages. Development of the service industry in Appalachia is often urged, but it is far from clear that increased jobs in this sector help to achieve the basic goal of increasing per capita income. A study of methods of measurement, economic impact, and State strategy concerning this component of the industrial structure is needed. The study should define those areas of service employment which help a local economy and those that do not. The social significance of this employment should be carefully evaluated since many service jobs are minority group jobs.

5. The Distribution Industry -

Northeastern Pennsylvania soon will have four new Interstate highways, giving the area a remarkable transportation asset which would seem to invite distribution centers for major industries. A study should be completed to determine how the region best can capitalize on its new asset and what must be done to attract distribution facilities.

6. The Carbon Industry -

The carbon industry centered on Saint Marys is an unusual economic specialty which has spurred much of the growth in north central Pennsylvania and spun off small related enterprises. It seems to have a good potential in industries such as space and nuclear energy so there should be a study of the carbon, graphite, powdered metal, and related industries to determine what can be done to help north central Pennsylvania increase its share of employment as the industry grows.

7. Highway Impact -

Under the assumption that new highways are important to economic development, study the impact of I-80, the Keystone Shortway, which is opening a new transportation corridor. The study might also cover an unchanged existing highway and an upgraded existing highway for comparison to determine which produces the greatest economic return.

8. Freight Rates and Industrial Location -

Study freight rates and compare them among different areas. This study would be based on the premise that the presence of railroads and highways is necessary for industrial development but that unless freight and express rates for an area are competitive, the area may not be able to attract certain new industries.

STATEWIDE DEVELOPMENT PROGRAM

On the basis of the experience of the Pennsylvania Department of Commerce in implementing the Appalachian Regional Program in Pennsylvania, the Pennsylvania State Planning Board, in addition to the annual review and updating of this Development Plan, will proceed with the formulation of a similar plan for the social, economic, and environmental development of the State.

The first phase of this planning effort will cover the fifteen county area comprising the non-Appalachian portion of the State.

This effort will consider the physical, economic and human resources qualities of those State Planning Regions making up this fifteen county share of "megalopolis" in Pennsylvania. It will strive to articulate policies and plans as the basis for programs and projects dealing with this vital part of the Commonwealth. Emphasis will be directed to a policy for urban development that recognizes the urgencies of land use, land conservation and the amenities in a burgeoning environment; the options available in allocating resources for residential, commercial and industrial development; and the priorities of investment with respect to transportation, educational programs and facilities, medical centers, cultural activities, and the rebuilding of cities paralleled by the possibilities of new town development.

The Pennsylvania Statewide Development Plan will use to the fullest extent the Appalachian experience which demonstrated that the State-Federal partnership as developed in the Appalachian Program is exemplary and warrants Statewide application as an approach to the coordination of State and Federal programs and dollars with local capabilities.

BACKGROUND OF THE APPALACHIAN PROGRAM

This Plan is the third annual submission by the Commonwealth of Pennsylvania to the Appalachian Regional Commission. It describes planning and development goals for the 52-county Appalachian section of the State. To officials and technicians, the purposes of this Plan and the goals of the Appalachian Regional Development Act are well-known. To general readers living in the development districts which the Plan describes, some background information may be helpful.

The Appalachian Regional Commission was established by Congress in 1965 with a broad responsibility to oversee and encourage the development of the Appalachian Mountains area. In the realm of economic development aids from the Federal government, the Appalachian Regional Commission was itself a departure from traditional Federal dominance. Instead, a partnership of the states and the Federal government was created in the Commission giving the states equal share with the Federal government in shaping the program and allocating funds. Another departure from traditional practice is the economic development philosophy etched in the Act by Congress. A tenet of this philosophy is the requirement that investments assure the maximum return on public dollars invested in the development of the region. Thus, the Appalachian Act is not a welfare program but a development program directed to correcting deficiencies that stand in the way of participation in the prosperity of the Nation.

These distinctions are important because they influence the planning and expenditures of the Appalachian Regional Commission.

Another important, though by no means unique, feature of the Appalachian Regional Development Act is the directive for regionwide coordinated planning. In achieving this goal, however, the Commission itself assumes the responsibility for regional coordination and planning while leaving state development planning to the individual states themselves. The State is responsible for the submission of a State Appalachian Development Plan which sets forth goals and objectives, identifies problems and potentials, and establishes priorities for spending Appalachian funds.

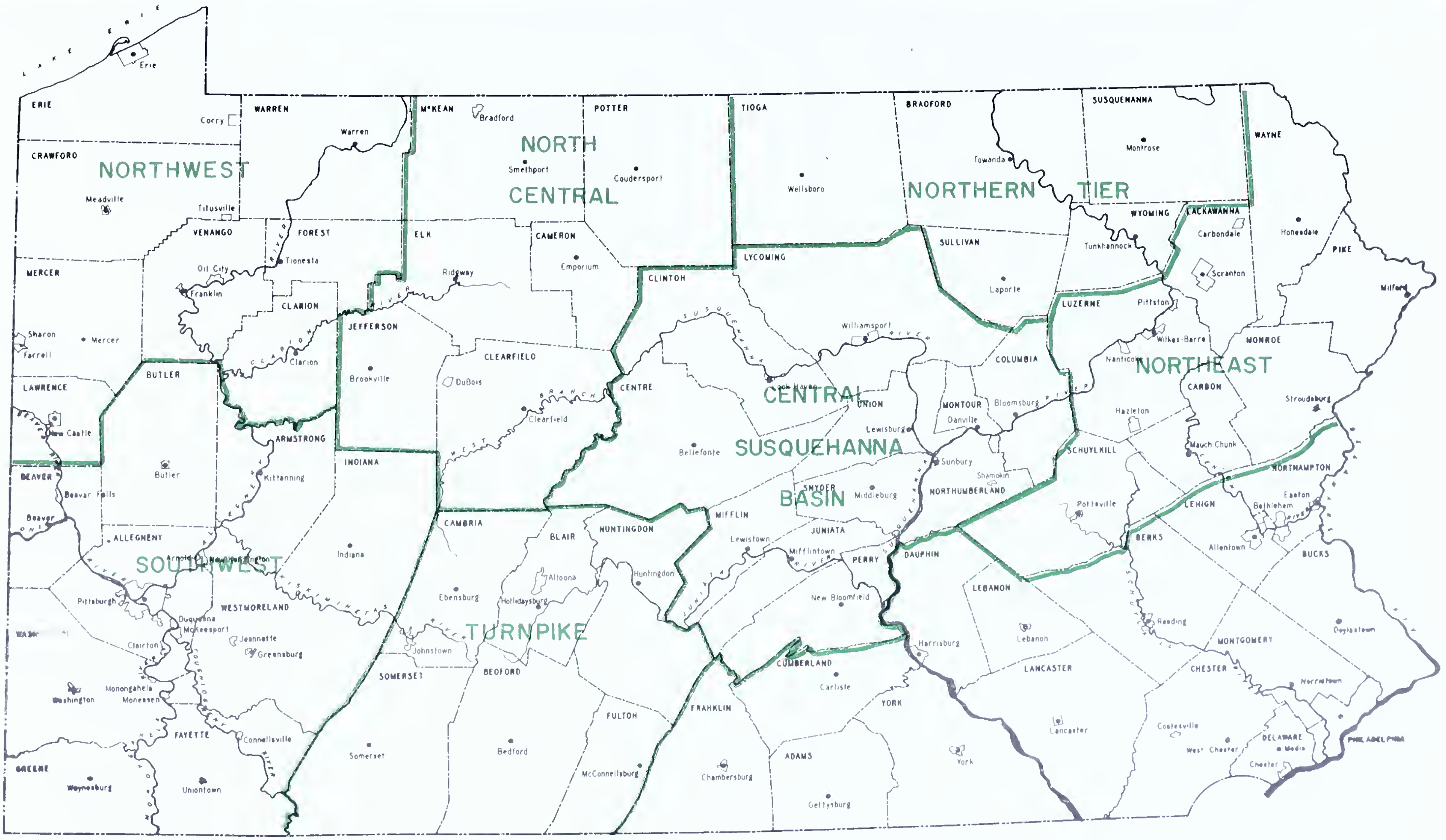
In this manner, each state is responsible for its own development planning within limitations prescribed by Congress and the regional framework established by the Appalachian Regional Commission. States thus have flexibility in dealing with obstacles to economic growth; one may emphasize the importance of improved facilities for higher education, while another is most concerned about training facilities for vocational and technical education. To others, community facilities such as hospitals, libraries, airports, and sewage treatment systems demand early attention to overcome obstacles to economic and social development. Whatever the emphasis of a particular state may be, its development plan is necessarily a blend of many factors which have been identified by state and local officials as necessary for rapid economic growth.

Far from the static "master plan" concept, Appalachian development plans are expected to be updated and improved annually as wider knowledge, greater experience, and changed conditions suggest. In the parlance of professional planners, this is known as continuing planning, a term of especial significance in Appalachian states because it guarantees constant adjustment. New opportunities can be responded to as in the case of providing access roads to newly arrived industries, or manpower retraining facilities may be downgraded if sudden decreases in unemployment become evident.

In the spirit of greater detailing of our knowledge, this Plan has been developed. More extensive field work has been possible with the organi-

Map 1

APPALACHIA DISTRICTS



zation and staffing of seven Local Development Districts in Pennsylvania. These Districts are groups of counties which have joined together to plan for their joint development and improvement. Greater detail and intimacy with local conditions are now possible through participation by Local Development District officials who have supplied much of the insight and information reported in subsequent chapters.

In cooperation with Local Development District officials, growth potentials have been evaluated, economic and social factors impeding development have been identified, and programs of public investment to develop significant potentials for growth have been proposed. A fundamental concept around which this planning effort revolves is the awareness that funds are limited - that they must therefore be spent where they will have the maximum benefit in creating permanent jobs, higher income levels, and improved living conditions.

APPALACHIAN DEVELOPMENT PLANNING AND OTHER STATE PLANS

Many planning efforts are underway simultaneously and require coordination. In this regard, the Appalachian Development Plan is considered to be but one element in the Statewide development planning program for Pennsylvania which is in process. This is true because Appalachia Pennsylvania includes about three-quarters of the land area and about half the State's population. More importantly, Appalachia planning concentrates on economic and social development, leaving other considerations to other programs.

In Pennsylvania, the State Planning Board is embarked upon a comprehensive development plan (including regional or district development plans) that will deal with a broader array of physical, social and economic problems than that appropriate under the Appalachian Regional Development Act. Within the economic sphere such general goals as decreased unemployment, increased per capita income, stabilization and diversification of regional economies, and optimum realization of manpower potentials are clearly compatible with the purposes of the Appalachian Regional Development Act. Social or human services objectives often summarized as "the full realization of personal development of each citizen" are also compatible with the Appalachian Act, although as this phase of planning touches problems of poverty, aging, and minorities, relationships between the State and the Federal Government shift to other departments specializing in these problems.

Similarly, State planning efforts dealing with environmental development - touching problems such as air and water pollution, flooding, reforestation, mine fires, mine subsidence and unreclaimed strip mines, traffic congestion, urban decay, and the fallout of urbanization along roadsides - involve the State with additional Federal agencies. There is a relationship with the

Appalachian Development program when environmental improvements to community facilities, transportation, housing, and so forth, are proposed since many of these environmental improvements have direct economic development implications.

Necessarily, the State Planning Board seeks to mesh efforts from many programs. In this respect, the fundamental units of planning - the thirteen State Planning Board Regions - have served as the basis for organizing the Appalachian Development Districts and the Economic Development Districts (of the Economic Development Administration). And within the State Government they were grouped to form the Human Services Districts by which a variety of health and welfare programs are administered.

The State Planning Board Regions were studied in a series of thirteen reconnaissance reports which brought together pertinent basic data upon which subsequent planning programs are being established by local and regional agencies. Regional planning thus serves as a bridge which brings together state and local views.

Since many development problems transcend regional boundaries, they are more appropriately studied in a Statewide context. River basins, recreation, air basins, and transportation routes are examples. Indeed, the State is participating in interstate planning efforts which involve not only Appalachia but river basins and the Philadelphia metropolitan region (which includes parts of New Jersey).

Most of these state planning concerns have been described in terms of area, yet it is apparent that much planning work is being performed along functional lines. The Pennsylvania State Supplement to the Appalachian Water Resources Plan and the Outdoor Recreation Plan are examples of the functional studies prepared by the State Planning Board in cooperation with operating agencies in State Government, and the biennial Capital Program (also prepared by the Board) is the result of continued close relations between functional departments and Planning Board staff. Hence, the state planning effort in Pennsylvania includes not only traditional procedures in which goals are identified, conditions investigated, and solutions proposed, but also a heavy emphasis on coordination and support of functional departments whose activities may contribute to the economic, social and physical development of the Commonwealth.

APPALACHIA PENNSYLVANIA

Appalachia Pennsylvania is primarily an economic designation referring to the northern and western parts of the State where traditional sources of employment - coal mining, farming, railroading and steel making - have declined sharply and brought about drastic economic dislocations. It is also sharply defined by distinctive terrain and resources that contrast with the southeastern section of the State.

PHYSICAL SETTING

Blue Mountain, a continuous ridge that forms a 180-mile arc through the southeastern section of the State, separates Appalachian and non-Appalachian Pennsylvania. Physiographically, it divides the Older and Newer Appalachians - the Older Appalachians contain many of the fertile eastern counties with limestone rich soils and medium-size cities with diversified manufacturing enterprises. The Newer Appalachians (also frequently referred to as the Ridge and Valley Province) are notable for their sharp angular ridges where the valleys are less fertile, transportation patterns more tortuous, extractive industries more prevalent, and cities are more scattered than in the Older Appalachians. This 50-mile wide topographic feature gives way to the Allegheny Plateau. A deeply dissected upland, the rugged Plateau contains soils less hospitable to agriculture than either the Newer or Older Appalachians. Here the emphasis on extractive industry - especially bituminous coal, but also oil and gas, sand and clay, gravel and limestone - is apparent. In the southwestern section, primary metals, mining and other heavy industries are centered about Pittsburgh. The Uplands of the Allegheny Plateau, like the ridges of the Newer Appalachians, were once marked by great stands of hemlocks, pine and other soft woods. Today, hardwoods which re-seed themselves more quickly than most softwoods, are prevalent, and vast areas which 19th Century timber exploiters stripped and left to the ravages of fire and erosion are being reclaimed for sustained production through sound timber management practices.

To the northwest, the rolling, dissected Allegheny Plateau flattens and melts into the narrow Coastal Plain bordering Lake Erie. Here are located truck farms and vineyards - agricultural pursuits uncommon in other northern sections of the State.

Important to an understanding of Appalachia Pennsylvania is the influence of the rivers which drain the area. They were, of course, the earliest transportation routes - not alone because rafts and shallow bottomed boats could move large loads on them easily, but because they carved the only routes through many of the ridges. Canals built in the 1820's and 1830's followed the rivers and railroads that supplanted the canals did likewise. So too did many of the highways constructed prior to this era of Interstate highways.

The two great river systems draining Appalachia Pennsylvania are the Susquehanna and the Ohio, both of which were once followed for hundreds of miles by canals. Today only a 72-mile stretch of the Allegheny, the 102-mile length of the Monongahela and the Ohio are navigable. Today, these rivers and their tributaries are important sources of water. Impoundments have been constructed for flood control, navigation, hydro-electric power generation, and recreational activity. And, too often, the rivers reflect environmental abuse in the quality of their waters. They are polluted by the dumping of insufficiently treated industrial and municipal wastes. Mine drainage has killed all fish and aquatic life in many streams. Parts of both the North and West Branches of the Susquehanna suffer in this respect as do the Monongahela, Clarion, and Kiskimenitas Rivers and other tributary streams.

The rivers and terrain largely shaped the transportation routes and settlement patterns of today; the great stimulus for trade and settlement came from the region's natural resources. By the beginning of the 19th Century, the superior heating qualities of anthracite had been discovered, and for the next century anthracite was the dominant domestic heating fuel in eastern seaboard cities. Anthracite mining built proud cities from Shamokin to Carbondale in the northeastern section of the State.

In the northcentral section, timber was treated like other natural resources - mined as an exhaustible resource. Its economic reign was shorter and wealth more fleeting, leaving Williamsport and lesser cities as a legacy. Charcoal was an important forest product in the early 19th Century when it supplied fuel to early iron furnaces which spotted the countryside as low and medium grade iron ores were discovered. As technology progressed, the abundant bituminous coal resources of the Allegheny Plateau were employed in the manufacture of iron and later steel. Deep mines in southwestern Pennsylvania produced an excellent metalurgical coking coal, which thrust the Pittsburgh steel industry ahead of other sections of the Nation. And bituminous coal also came into great demand with the rise of railroads as the Nation's most important form of transportation. Steel centers and mining towns came to dominate western Pennsylvania, while to the north in Venango, Warren, McKean and neighboring counties, oil and natural gas were discovered and became the economic bases for communities such as Oil City, Franklin, Titusville, Warren, and Bradford. The availability of both natural gas and good deposits of sand gave rise to today's glass industry, just as the clays and gas of the region were the necessary resources for the pottery, brick, and vitreous china products produced throughout Appalachia Pennsylvania.

ECONOMIC CHANGES

The same force that thrust Pennsylvania into industrial leadership - advancing technology - curbed her ascendancy, especially in the Appalachian section. Just as the discovery of ways to use anthracite and bituminous coals eclipsed the demand for charcoal, so today have natural gas, fuel oil, and electricity replaced coal. And the change in modes of transportation away from railroads and the use of diesel locomotives also meant a switch in fuel sources as well as declines in railroad employment. Even in the steel industry changes have been deep; new processes like the oxygen converter, continuous casting, and electric furnaces, as well as the higher fabricating costs of finished products, have encouraged the dispersion of steel mills. Nor was Appalachia Pennsylvania immune from the sweeping changes prompted by the mechanization of farming.

The results can be read in the employment losses which occurred in Appalachia Pennsylvania between 1950 and 1963:

*143,400 jobs lost in mining;

* 49,600 jobs lost in agriculture;

* 47,400 jobs lost in railroading;

* 26,000 jobs lost in metals manufacturing.

By 1963, the jobs lost in these four industries represented 27.5 percent of the total 1950 Appalachia Pennsylvania employment. During the same period, employment increases in other industries came within 9,400 of replacing this 266,400 job loss in Appalachia Pennsylvania, yet this replacement occurred at a time when the non-Appalachian section of the State experienced a 334,800 job increase. (A corresponding increase in Appalachia during this period would have been 357,200 jobs.)

Thus, during this one 13-year period, Appalachia Pennsylvania seems to have stood still economically. But for many of those displaced from their farming, mining, or railroading jobs, there was clearly a downward plunge in family well-being since their skills were not easily transferable to new occupations. In 1960, the disparity between Appalachia and non-Appalachia Pennsylvania was significant.

TABLE 1

DISTRIBUTION OF FAMILIES BY INCOME, 1960

	Total	Under $2,000	$2,000-$2,999	$3,000-$5,999	$6,000-$9,999	$10,000 & Over
NON-APPALACHIA PENNSYLVANIA						
Number	1,372,361	105,681	83,198	472,410	480,181	230,891
Percent Distribution	100.00	7.70	6.06	34.42	34.99	16.82
APPALACHIA PENNSYLVANIA						
Number	1,530,250	168,910	130,165	608,143	449,105	173,927
Percent Distribution	100.00	11.04	8.51	39.74	29.35	11.37

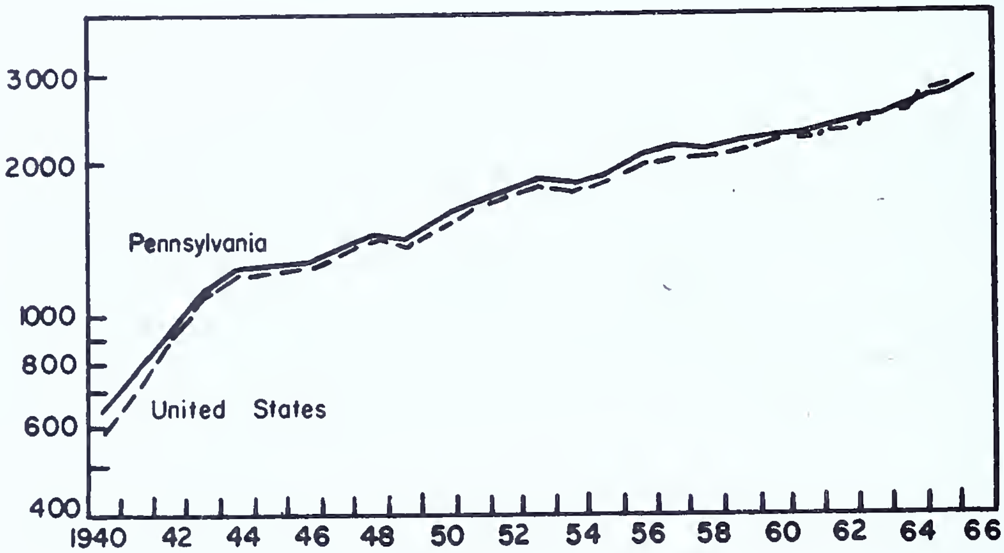
Source: Appalachian Regional Commission

A fifth of the families in Appalachia Pennsylvania had incomes of less than $3,000 in 1960, while this was true of a seventh of the families in non-Appalachia Pennsylvania. And in the $10,000 and over group, it is apparent that Appalachia Pennsylvania had only two-thirds as many affluent families as non-Appalachia Pennsylvania.

Per capita income offers another measure of comparison. It is noteworthy that between 1940 and 1966 the Pennsylvania per capita income record is nearly identical to the Nation's.

CHART 1

U. S. AND PENNSYLVANIA PER CAPITA INCOME



NOTE: 1940-47 data not precisely comparable to data for later years.
SOURCE: U. S. Department of Commerce.
Prepared by Federal Reserve Bank of Philadelphia.

Yet, for Appalachia Pennsylvania the trend has not been as favorable.

TABLE 2

PER CAPITA INCOME

APPALACHIA AND NON-APPALACHIA PENNSYLVANIA

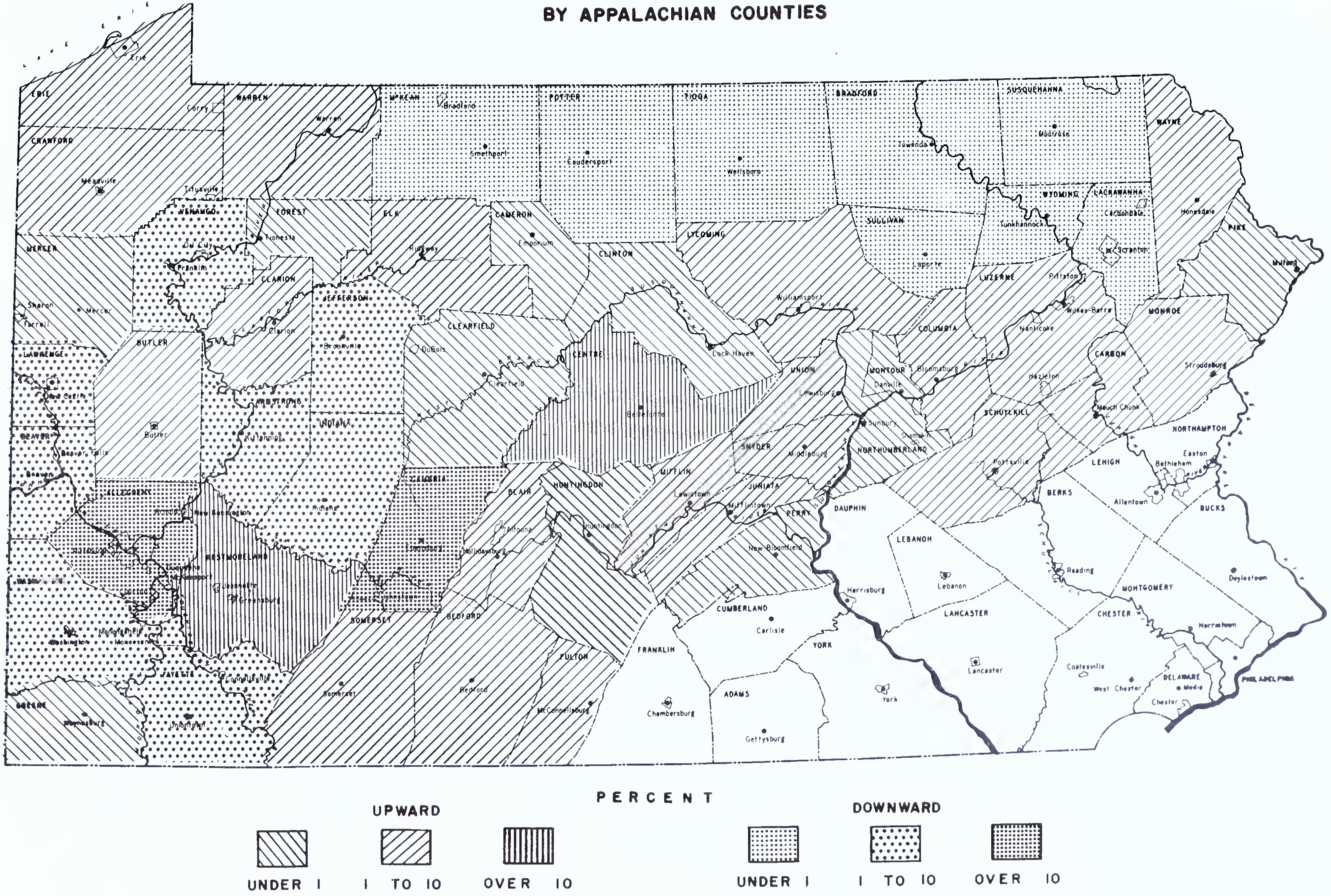
	1950	1963
Appalachia Pennsylvania	$1,481.66	$2,280.93
Non-Appalachia Pennsylvania	1,677.38	2,632.84
Difference	$ 195.72	$ 351.91

Source: State Planning Board working paper.

Map 2

POPULATION SHIFT 1960-1965

BY APPALACHIAN COUNTIES



Appalachia Pennsylvania had already fallen behind the non-Appalachian section by 1950 as the per capita income table shows, and in the following 13-year period the gap became wider with manifold implications: lower incomes affect the tax base and ability of communities to provide needed facilities and services, and the absence of these public services impedes economic development needed to raise incomes. Thus, a downward spiral is set in motion feeding upon itself. For the people themselves the lower incomes often reflected unemployment as jobless rates hit 15 and 18 percent of the labor force in several areas in the late 1950's.

Predictably, population movement accompanied Appalachia Pennsylvania's economic setbacks. Between 1950 and 1960, 538,636 people left Appalachia Pennsylvania and an additional 281,900 left between 1960 and 1965. Over one-third of those who left in the fifties were young people between 20 and 39 years old - just the people no area can afford to lose. And the presumption is that this age group led the out-migration that continued to plague Appalachia in the first half of the present decade.

Even so, Appalachia Pennsylvania is not without hope despite its past losses. The Appalachian population still has close to the same proportion of

TABLE 3

PEOPLE 20-39 YEARS OF AGE AS A PERCENT OF ALL PEOPLE

	1950	1960
Appalachia Pennsylvania	31.2	24.5
Non-Appalachia Pennsylvania	31.6	25.2
United States	30.8	25.7

Source: U.S. Department of Agriculture, Economic Research Service, Net Migration of the Population, 1950-1960, by Age, Sex, and Color, May, 1965.

young people as non-Appalachia Pennsylvania and the Nation because of higher birth rates in earlier years. Appalachia Pennsylvania still has a fair share of the young and vigorous people who are important to social, community, and economic activity, although the proportions would be much larger without the migrations of the fifties and sixties.

Thus, it can be fairly inferred that Appalachia's depressed economy has caused serious population losses, but the situation has not become critical. And if, as assumed, these young people are leaving in search of jobs, recent history suggests fewer may have reasons to leave today than in the past.

An important positive sign is the decline in unemployment rates. Whereas in 1958 none of the nine major labor market areas in Appalachia Pennsylvania had an unemployment rate of less than 10 percent (and six of them had rates exceeding 15 percent), by 1962 the Appalachian average fell to 9.8 percent. Since then, buoyant economic conditions have all but erased the scar of unemployment as a condition of Appalachia Pennsylvania's economic life.

TABLE 4

UNEMPLOYMENT RATES IN APPALACHIA PENNSYLVANIA

1962	1963	1964	1965	1966	1967
9.8	8.5	7.7	4.7	3.6	3.7

Source: Derived from Pennsylvania Department of Labor and Industry, *Pennsylvania Total Civilian Work Force, Unemployment and Employment: 1950-1967*.

Economic analysts have not lost sight of the fact that this upsurge in employment has occurred in concert with war production for the Vietnam conflict just as was the case in the early fifties in Pennsylvania when spending for the Korean War was a notable spur to the economy. Yet evidence suggests that during the earlier war jobs were preserved in declining industries - steel, railroading, and coal mining - whereas today new jobs in new industries seem to be the effect of the wartime economy on Pennsylvania. With an end to the Vietnam conflict and cuts in defense spending, then, some job losses are expected, but there is no indication that structural adjustments such as those in the fifties will occur.

THE FULL EMPLOYMENT GOAL

Job losses of the fifties reverberated throughout Pennsylvania, causing deep concern among business and political leaders, educators, welfare workers, and many others who united in common cause to create jobs for idle workers. Hardly any community in Appalachia Pennsylvania was not part of some industrial development organization by the middle of the decade; in 1956 the Commonwealth established the Pennsylvania Industrial Development Authority and financed it with State appropriations to aid in providing buildings for industries that would locate in areas of high unemployment. And subsequently, the Federal government followed the pattern when it established the Area Redevelopment Administration (succeeded by the Economic Development Administration) which aids areas suffering from high rates of unemployment.

Conditioned by this scourge of joblessness, the first reflex is to measure prosperity, affluence, and the good life by unemployment rates (even though the officials who prepare those rates caution users on their deficiencies). When a large section of the population is unemployed, the argument goes, the first responsibility is to get the people back to work so they may support themselves. And indeed, the Commonwealth of Pennsylvania did assume that job creation was a very high order of business. Yet after jobs were created and rates of unemployment declined below 4 percent, other equally vexing economic realities that were overshadowed by unemployment came into view.

One of these problems which has plagued Pennsylvania, especially the Appalachian section, centers on the sources of jobs. The State has been in an uphill struggle for years because it contains many slow-growth industries - industries whose expected future will be the source of slight employment increases.

Similarly, over these same past few years Pennsylvania has shown little success in attracting jobs in fast-growth industries - those businesses whose place in the national economy guarantees dynamic continued growth.

A third economic reality that deserves some comment is the question of the quality of employment; even though statistically a job is a job, economically the same is not true (as is indicated by the fact that nationally a sixth of the families receiving welfare payments in 1963 were headed by a perso employed full-time). Some industries typically pay higher wages than others, so that the mixture of high and low wage paying industries can loom as importan to workers as the existence of jobs themselves. And to those young people entering upon work careers - the people in their twenties who have been leavin Appalachia Pennsylvania in such large numbers - quality of work opportunities i thought to be at least as important as quantity.

A fourth economic consideration that comes to the fore with the decline of unemployment is the fact that even in times of robust economic activity, many people do not enjoy the fruits of a productive economy. In economic terms their lack of productivity and their dependence are a drain or a damper on the economy, while in human terms their lack of participation suggests the need for broadening the system so they can be included.

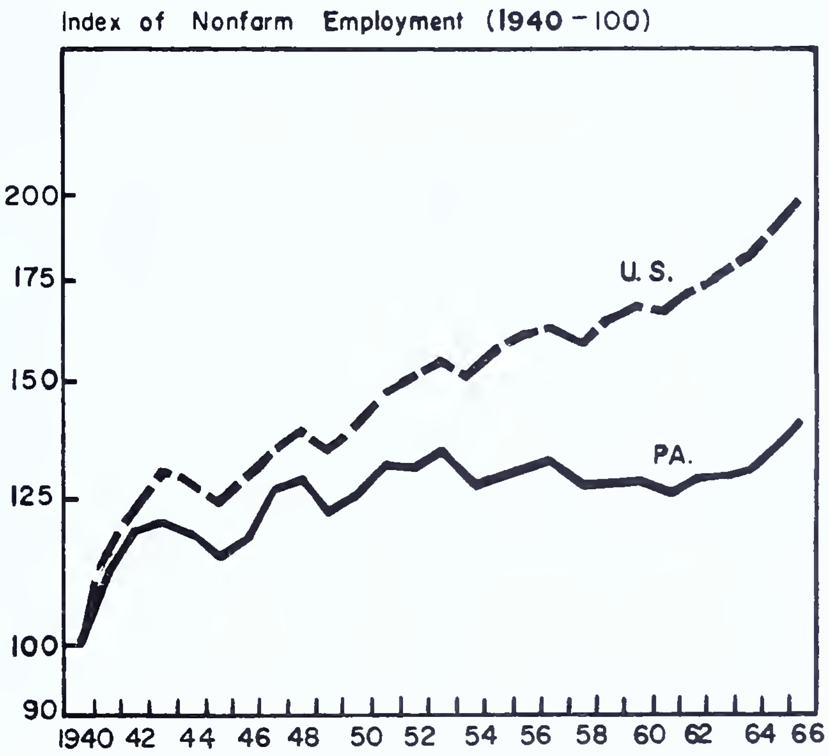
A fifth consideration which pervades efforts to create new jobs and remains relevant if they are to be retained is the quality of the environment in which people work and live. On the one hand, community facilities - water supply, roads, sewage treatment, hospitals, libraries, schools - support businesses by providing improved business conditions, and on the other hand, they make an urban environment pleasant and attractive to workers.

Of these prominent economic problems only the first three lend themselves to statistical analysis. They are interrelated though perhaps not interdependent. An overabundance of slow-growth industries and an inability to attract fast-growing industries is probably part of the same dilemma.

The Federal Reserve Bank of Philadelphia has described the history of these conditions in a series of charts and brief statements.

Pennsylvania employment growth compares poorly to national growth. There was substantial employment growth in both the forties and sixties (although not as much as the Nation's) but in the fifties employment growth was almost nonexistent.

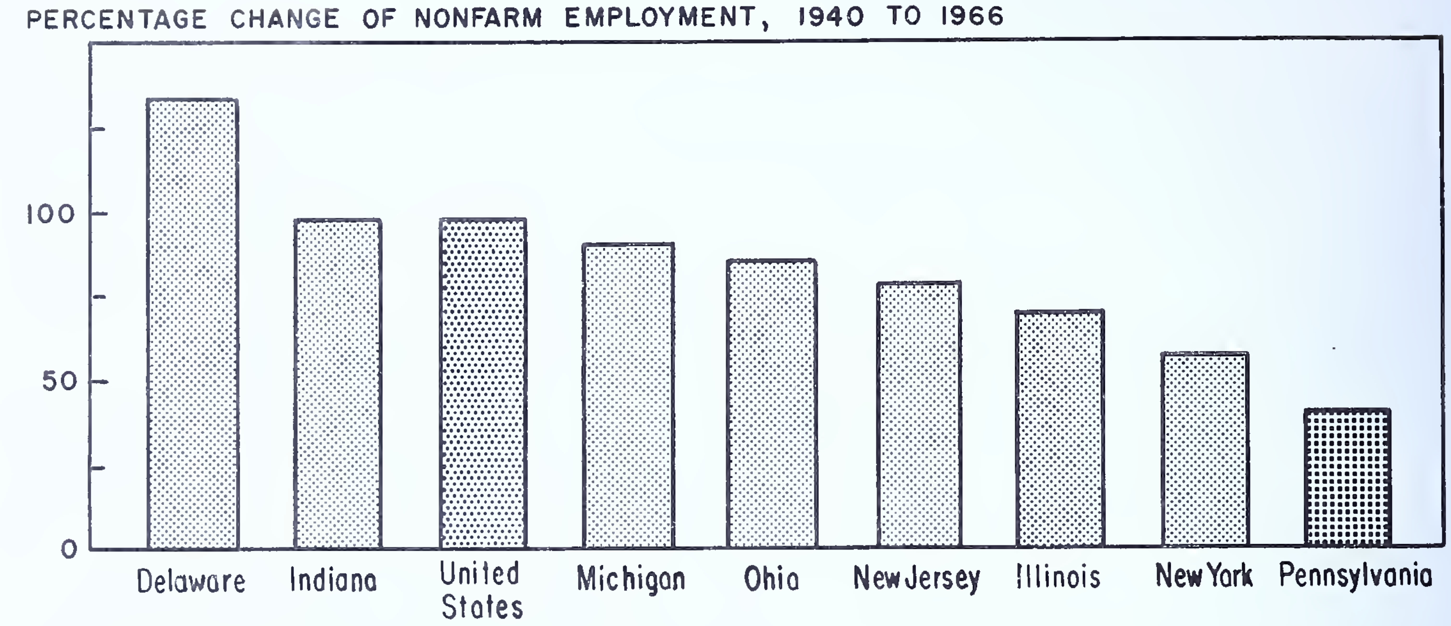
CHART 2
U.S. AND PENNSYLVANIA EMPLOYMENT GROWTH



SOURCES: Employment and Earnings Statistics for States and Areas, 1939-1966; Employment and Earnings and Monthly Report of the Labor Force (Sept. 1967).

Prepared by Federal Reserve Bank of Philadelphia.

CHART 3
EMPLOYMENT GROWTH OF PENNSYLVANIA AND NEIGHBORING STATES

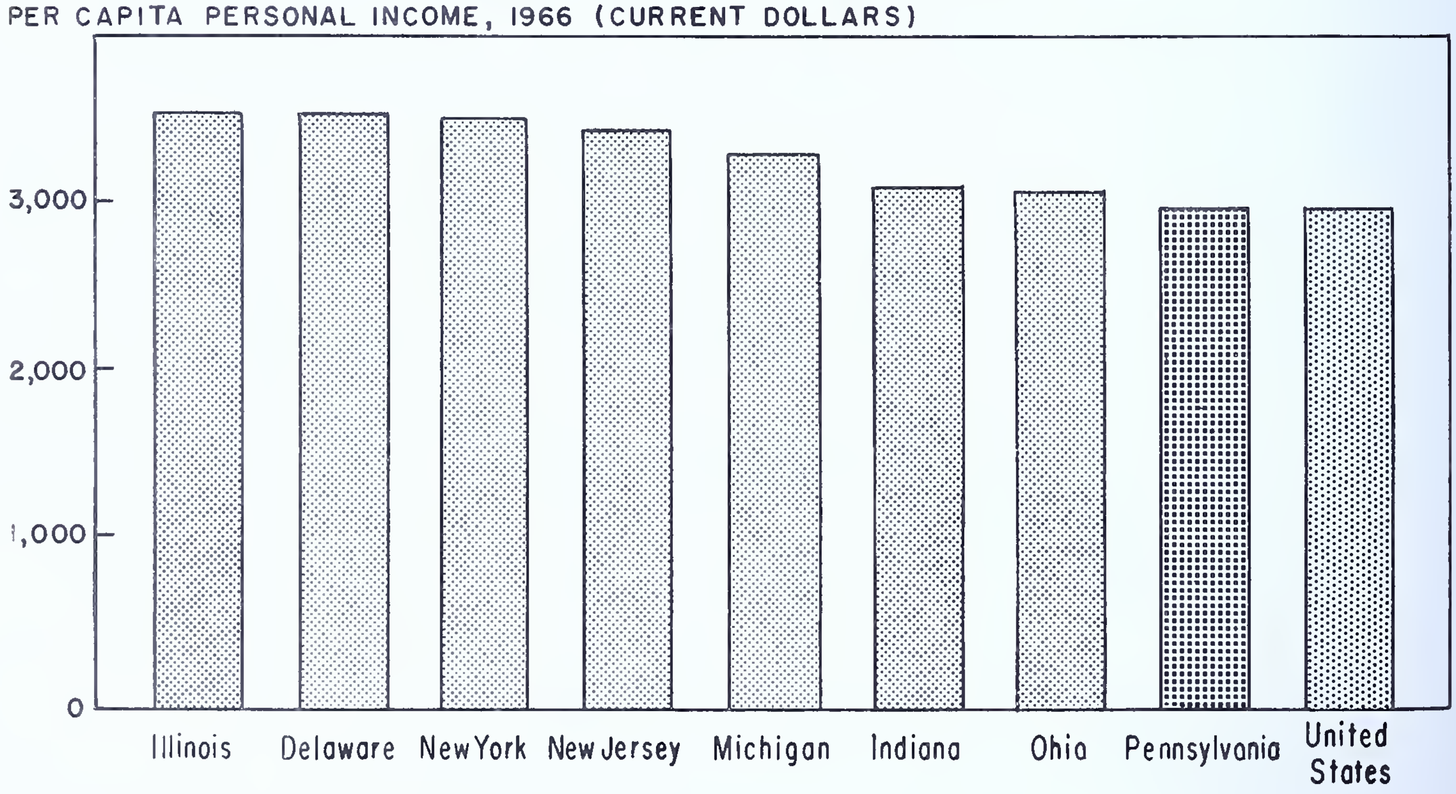


NOTE: 1940 employment data not precisely comparable to 1966 for Michigan and Indiana.

SOURCES: Employment and Earnings Statistics for States and Areas, 1939-1966; Employment and Earnings and Monthly Report of the Labor Force (1967).

Prepared by Federal Reserve Bank of Philadelphia.

CHART 4
1966 PER CAPITA INCOME OF PENNSYLVANIA AND NEIGHBORING STATES



SOURCE: U. S. Department of Commerce.

Prepared by Federal Reserve Bank of Philadelphia.

In part, the lag in employment growth experienced in Pennsylvania was shared with other states in the Northeast and Great Lakes manufacturing belt.

While some comfort may be found in the fact that other nearby industrial states also failed to grow at national rates, they did grow faster than Pennsylvania. By 1966, one benefit of this faster growth seems to have been higher per capita income.

Pennsylvania's lagging per capita income can be explained largely by conditions in Appalachia. Here the effective buying income per household in 1966 was lower than both the national and state averages and substantially below both non-Appalachia Pennsylvania and the seven neighboring industrial states.

TABLE 5

EFFECTIVE BUYING INCOME PER HOUSEHOLD, 1966

7-State Industrial Neighbors	$9,477
Non-Appalachia Pennsylvania	9,165
United States	8,532
Pennsylvania	8,530
Appalachia Pennsylvania	7,903

Source: Sales Management, June 1967

To understand the lag in employment growth and other economic conditions such as low incomes, the first two problems mentioned above - the presence of slow-growth industries and the inability to attract a large portion of fast-growth industries - require investigation.

In this context, "fast-growth" and "slow-growth" simply refer to the national rate of expansion. If the particular industry exceeds the national growth rate for all industries, it is considered to be a fast or rapid growth industry; if it does not, it is a slow-growth industry.

An analysis of the changes between 1958 and 1965 based on these concepts was made by the Pennsylvania Department of Commerce, and the results can be divided four ways to show whether Pennsylvania employment grew faster or slower than national rates and whether the growth was in fast-growth or slow-growth industries.

TABLE 6

PENNSYLVANIA EMPLOYMENT GROWTH

	Pa. Grew Faster than the Nation	Pa. Grew Slower than the Nation
In Fast-Growth Industries	2% of all Pa. Jobs in this category in 1965	42% of all Pa. Jobs in this category in 1965
In Slow-Growth Industries	7% of all Pa. Jobs in this category in 1965	49% of all Pa. Jobs in this category in 1965

Source: Pennsylvania Department of Commerce.

In 1965, 91 percent of Pennsylvania's total employment was concentrated in industries that grew more slowly in the State than did the same industries located elsewhere; only 9 percent of all jobs in the Commonwealth were associated with industries that performed more strongly in Pennsylvania than in the Nation during the 1958-1965 period.

Three elements that influence growth can be analyzed further to understand what has been happening. The three components of employment change are termed: (1) the national all-industry growth rate (United States growth); (2) the industrial mix effect; (3) the local area or competitive effect. The national all-industry growth rate is used as a point of reference so that the growth characteristic of a particular national industry over a given time interval can be described on the basis of its performance in relation to the average growth rate for all national industries combined. As mentioned above, the rate of growth of a particular national industry is characterized as "rapid" if it exceeds and "slow" if it falls short of the growth rate of all national industries combined during the same period.

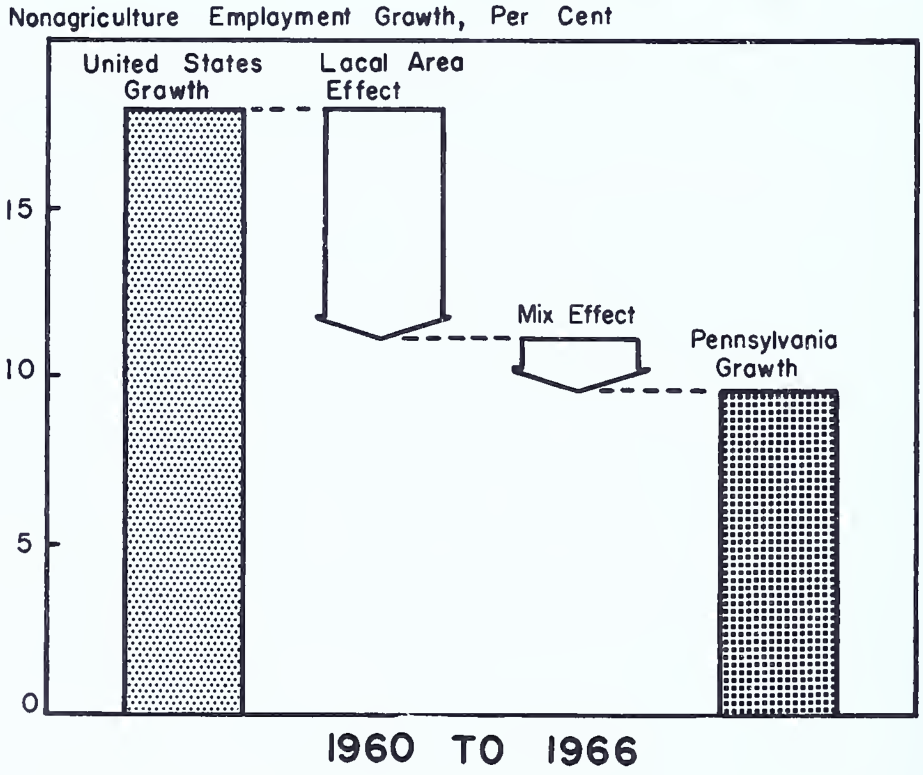
Whether or not an area has a rapid or slow-growth industrial mix is dependent upon the distribution of local employment among the various industries that make up the industrial profile. When the industrial composition of an area is heavily weighted by employment in national rapid growth industries, it is said to have a favorable industrial mix. Conversely, employment heavily concentrated in national slow-growth industries implies an unfavorable industrial mix.

The local share component or competitive effect compares the performance of a particular industry in the region in relation to the performance of that industry nationally. The rate of growth of a region within a particular industry is characterized as "rapid" if it exceeds and "slow" if it falls short of the growth rate in that industry nationally during the same time period. If employment in a local industry is growing more rapidly (or declining more slowly) than the same industry nationally, the region will obtain increasing shares of national employment in that industry and the region is said to be competing effectively with the rest of the Nation for new employment growth in that industry. If, on the other hand, employment in a local industry is growing less rapidly (or declining more rapidly) than in that industry nationally, the region will experience decreasing shares of national employment within the same industry. In this case, the region is not competing successfully with the rest of the Nation for employment growth in that industry.

A breakdown of the components of employment changes on an industry-by-industry basis facilitates the process of describing and analyzing the past or projected behavior of every industrial sector. An algebraic summation of the numerical values for all the component sectors permits an evaluation of the overall performance of the regional economy to be made and helps one to isolate the factors most responsible for differential rates of employment growth between the region and the Nation.

From 1960 to 1966, only one-fifth of the State's lag behind the rest of the Nation was explained by poor industrial mix, that is, too many slow-growing industries. Much more important was the failure of industries to grow as fast in Pennsylvania as in the rest of the Nation.

CHART 5
COMPONENTS OF PENNSYLVANIA EMPLOYMENT CHANGE

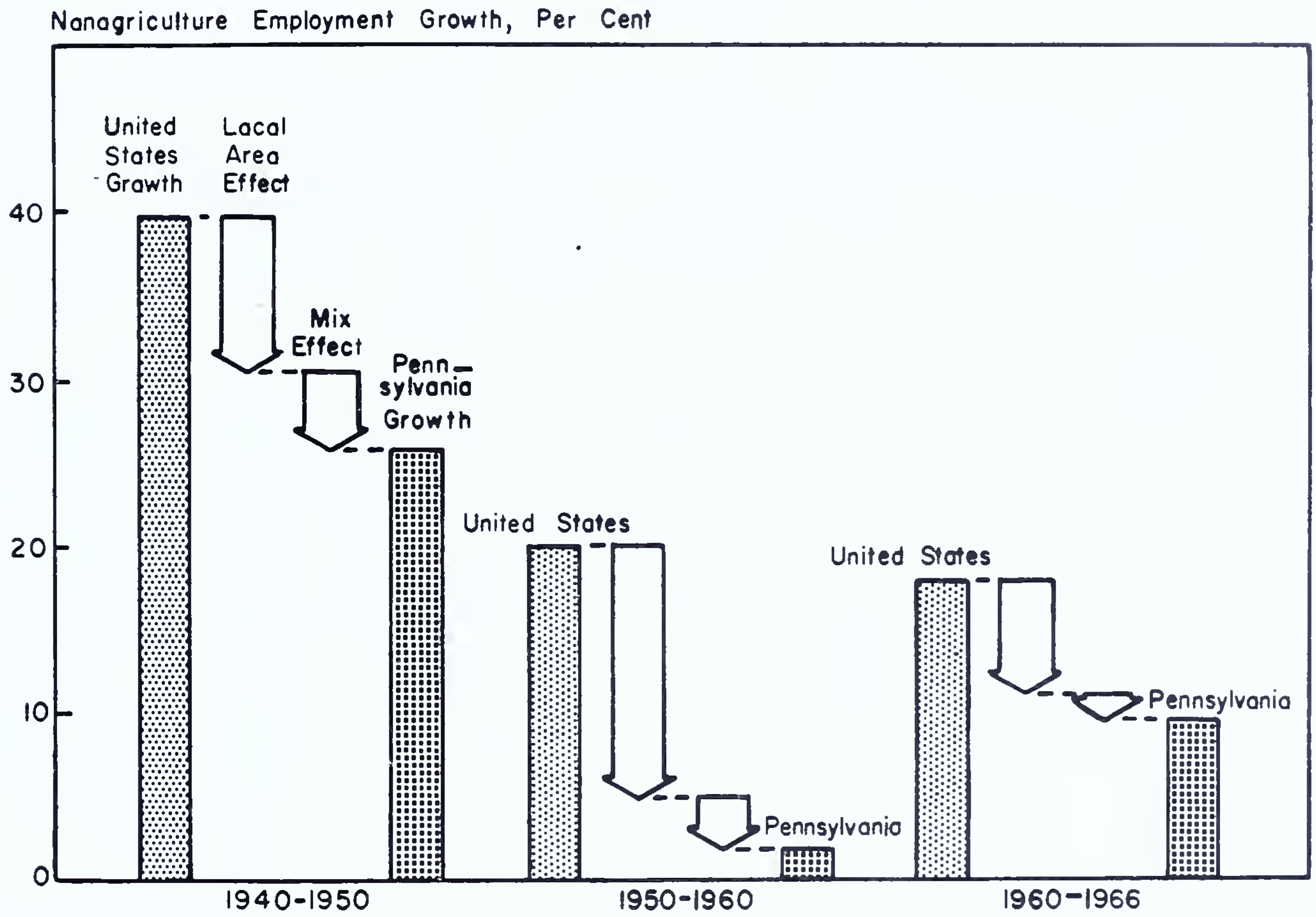


SOURCES: Employment and Earnings Statistics for States and Areas, 1939-1966; Growth Patterns in Employment by County, 1940-1950 and 1950-1960, U. S. Department of Commerce.

Prepared by Federal Reserve Bank of Philadelphia.

In comparison with surrounding states, Pennsylvania was found to have had the worst industrial mix among its industrial competitors, and the local area effect of growth was worse only in New York. Since 1963, the downward trend in Pennsylvania's share of national employment seems to have been altered, and the change can be attributed, in part, to an improving industrial mix.

CHART 6
COMPARISON OF COMPONENTS OF PENNSYLVANIA EMPLOYMENT CHANGE SINCE 1940



SOURCES: Employment and Earnings Statistics for States and Areas, 1939-1966: Lowell Ashby, Growth Patterns in Employment by County, 1940-1950 and 1950-1960, U. S. Department of Commerce.
Prepared by Federal Reserve Bank of Philadelphia.

These recent improvements in Pennsylvania's employment trends give cause for optimism. As the Federal Reserve Bank of Philadelphia pointed out, the 1963-66 trend, if continued, could give the State 5 3/4 percent of the Nation's employment by 1980, while the 1950-63 trend would result in but 5 percent (the 3/4 percent difference amounting to 711,000 jobs based on the Office of Business Economics projection for 1980). Thus, the interpretation of these findings and trends becomes critical, especially as it relates to public investments needed to support expected workers and their families.

Subsequent chapters of this Plan contain employment projections for each of the Local Development Districts, and they also report conclusions about growth and shifts in employment in each of these areas. But in addition to a review of the past, this analysis also has been applied to the future. Hence, the employment forecasts can be separated into their components to determine whether growth will be attributable to national growth, industrial mix,or local performance. Shift analysis then becomes a tool by which local areas can anticipate trends and work to overcome those that are unfavorable because of local conditions.

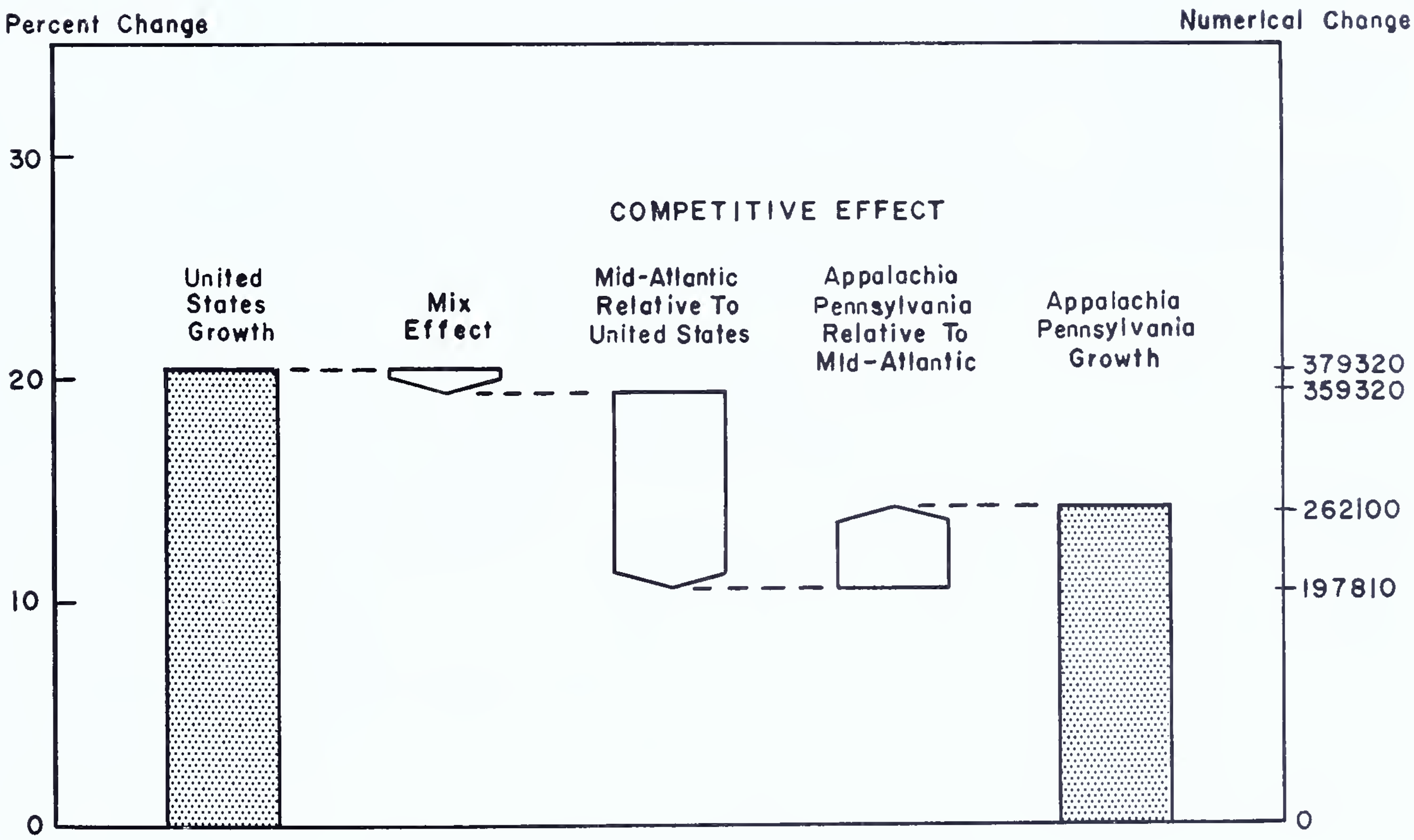
For just such purposes of analysis, employment projections were deve oped for each labor market area in the State to determine the likely job level in 1975, given known trends. The methodology for making these projections is described in the Appendix. Here it is sufficient to note that they are not target projections. Rather they are considered to be probable levels of emplo ment based on developments occurring through 1965. (This cutoff date was used to offset the effects of war spending for the Vietnam conflict.)

Perhaps it should be emphasized here that these projections are not predictions of the future. They are not goals; they are not even recommended levels of employment. They are simply the best judgment about the probable future unless decisive action is taken by officials - state and local - to change today's trends leading in these directions. Therefore, they are simply a tool by which public and private officials can examine the future economy anc take actions they deem appropriate.

The State Planning Board staff has prepared a differential shift analysis of these projections which compares Appalachia Pennsylvania with the Nation.* Just as Appalachia Pennsylvania has grown slower than the Nation during recent years, these projections suggest that Appalachia Pennsylvania will continue to grow slower than the rest of the Nation. If Appalachia Pennsylvania were to grow at the same rate as the Nation between 1965 and 1975, total wage and salary employment would increase by 379,300. Instead, the projected gain is only 262,100, which is a relative loss of 117,200 jobs for the area.

CHART 7

COMPONENTS OF EMPLOYMENT CHANGE APPALACHIA PENNSYLVANIA 1965 TO 1975



Source: Pennsylvania State Planning Board

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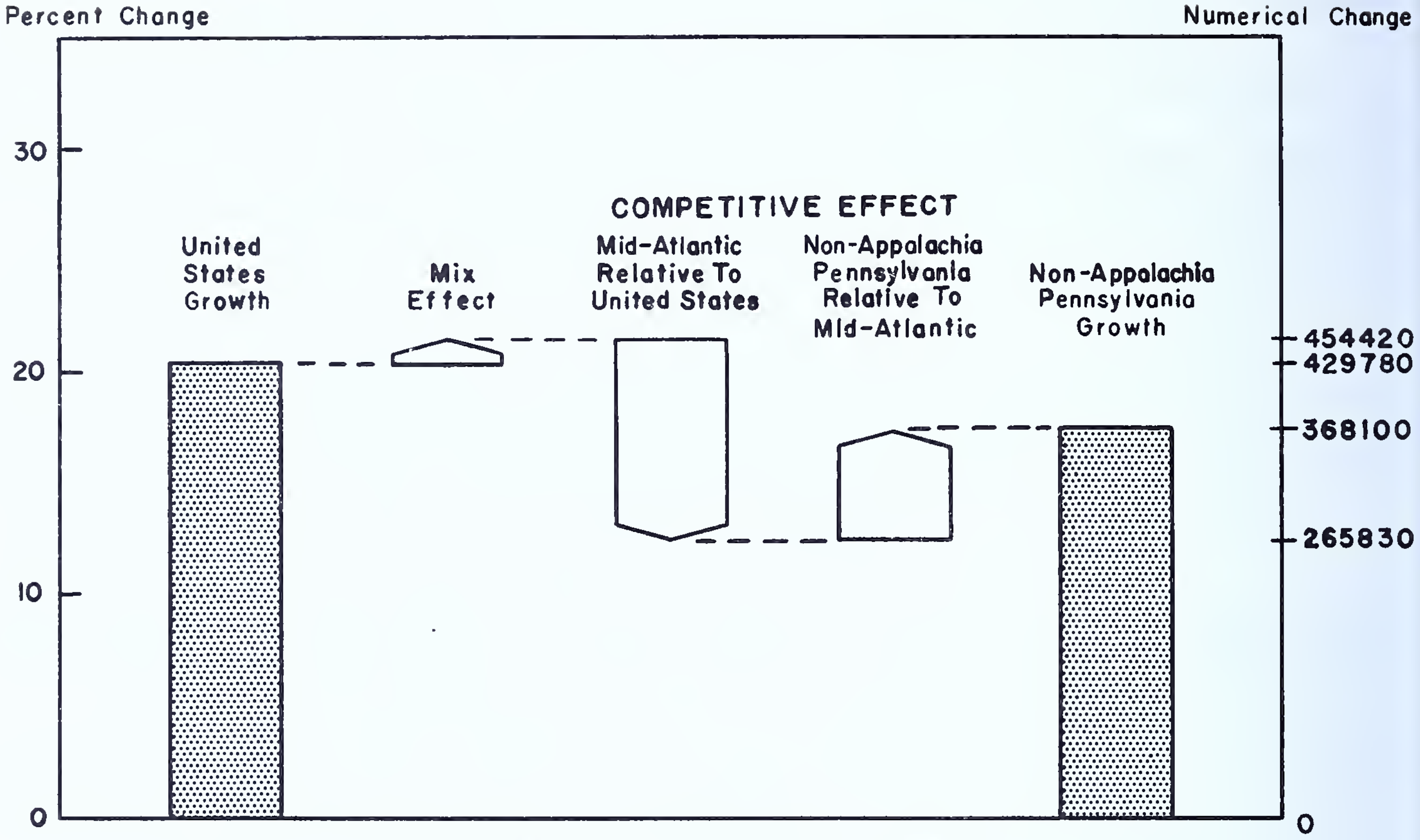
* The detailed tables of the shift analysis are in the Appendix.

CHART 8

COMPONENTS OF EMPLOYMENT CHANGE
NON-APPALACHIA PENNSYLVANIA
1965 TO 1975



Source: Pennsylvania State Planning Board

Two factors are responsible for this projected performance - poor competitive effect and adverse industrial mix.

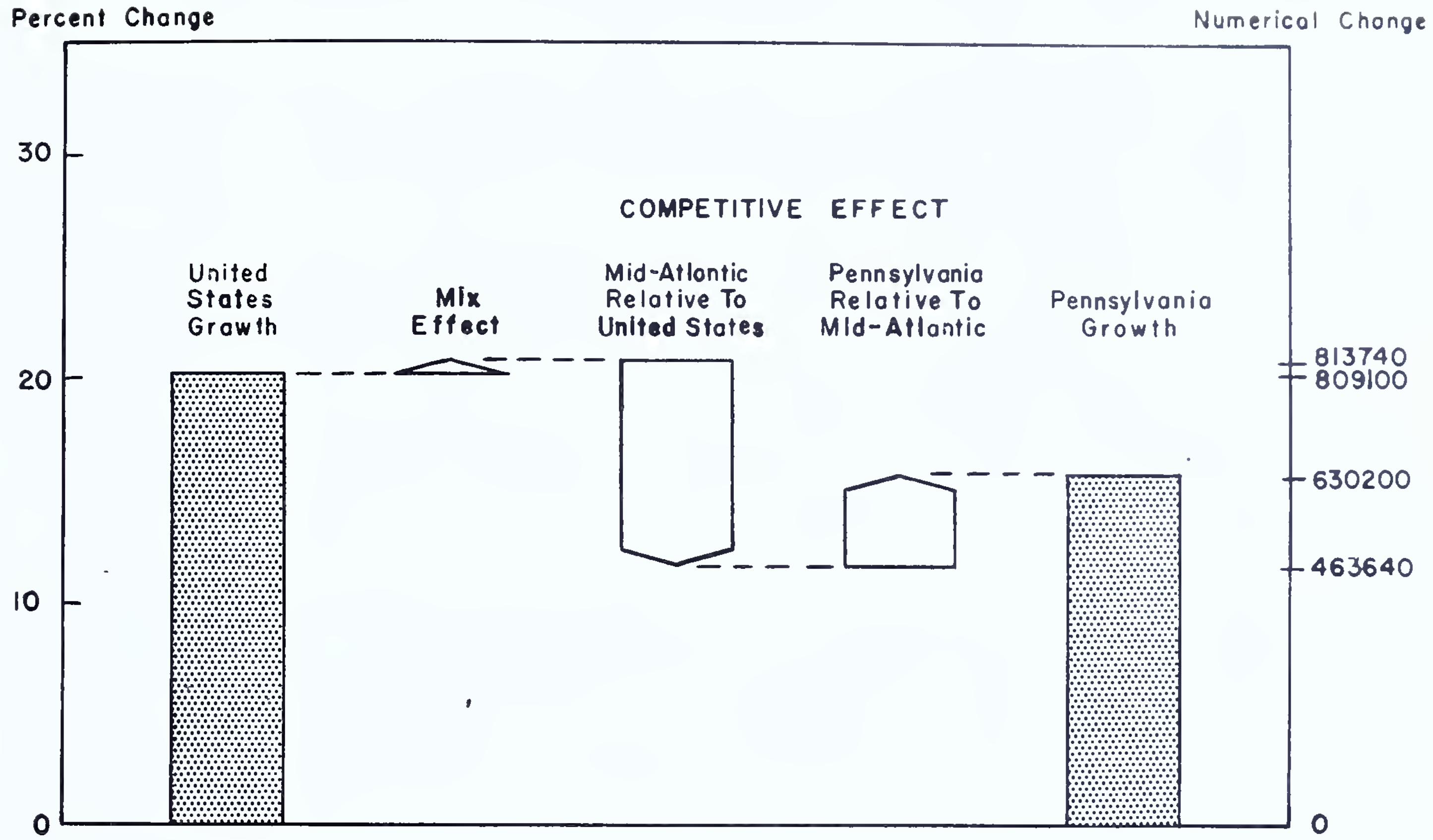
A total of 83 percent of the downward shift of Appalachia Pennsylvania employment is explained by the region's inability to compete successfully with the rest of the Nation for new employment growth.

CHART 9

COMPONENTS OF EMPLOYMENT CHANGE

PENNSYLVANIA

1965 TO 1975



Source: Pennsylvania State Planning Board

While the causes for this phenomenon are somewhat complicated and relate to such factors as rapidly growing southern and western markets that have spurred industrial dispersion, the decreasing importance of raw materials orientation of industries, industrial obsolescence in the East, and rising unit costs of production in the East relative to other sections of the Nation, there are also less tangible factors at work. Often these are grouped together under a heading called "business climate" which relates to the ability of development officials to bring in new business. In this sense, one section of the Nation competes with another for new jobs; one state competes with its neighbors; one district in Appalachia competes with another district.

This competitive effect between Appalachia Pennsylvania and the Nation has been divided to see how much of the drag is prompted by specific conditions within the region itself and how much derives from the fact that the Middle Atlantic states are not competing well with the remainder of the Nation. If Appalachia Pennsylvania were projected to have the same competitive effect as the Middle Atlantic states, the downward shift of employment would be 161,500 jobs - a 64,300 greater relative loss than that shown in the total competitive effect column in the Appendix Table.

Thus, Appalachia Pennsylvania is expected to perform well relative to the Middle Atlantic region. Among the industries in which Appalachia Pennsylvania is expected to have a significant competitive advantage over the Middle Atlantic states are the following:

Industry	Employment Change Attributed To Competitive Effect
Retail & Wholesale Trade	+32,900
Apparel	+10,300
Agriculture	+ 9,000
Primary Metals	+ 8,000
Contract Construction	+ 6,600
Non-electrical Machinery	+ 6,300
Transportation, Communications & Public Utilities	+ 4,500
Printing & Publishing	+ 3,800
Paper Products	+ 3,100

In part, these superior performance expectations are offset by relativ losses in industries in which Appalachia Pennsylvania is not expected to compete effectively with the Middle Atlantic states. Industries in which Appalachia Pennsylvania is expected to have competitive disadvantages are:

Industry	Employment Change Attributed To Competitive Effect
Government	-23,800
Food Products	- 3,600
Finance, Insurance, Real Estate	- 2,800
Services	- 2,000
Electrical Machinery	- 1,800
Textiles	- 600
Leather Products	- 150

Overall, however, Appalachia Pennsylvania is expected to compete more effectively with neighboring states than with the rest of the Nation.

A total of 17 percent of the net downward shift derived from Appalachia Pennsylvania's unfavorable industrial mix. Appalachia Pennsylvania has heavy concentrations of employment in industries growing slower than the average national rate for all industries. This results in downward shifts in the following industries:

Industry	Employment Change Attributed To Industrial Mix
Agriculture	-32,100
Primary Metals	-31,600
Trade	-19,600
Transportation, Communications & Public Utilities	-16,500
Mining	-15,400

Industry	Employment Change Attributed To Industrial Mix
Food	- 9,200
Apparel	- 8,700
Textiles	- 5,400
Stone, Clay & Glass	- 4,500
Lumber, Wood & Furniture	- 3,900
Leather	- 3,200

The negative values represent unrealized jobs because these industries are anticipated to grow at a lower rate than the national average.

By 1975, two of the top five sources of employment are expected to be rapid growth industries, but in neither of these is Appalachia Pennsylvania expected to compete effectively with either the Middle Atlantic region or the Nation.

TABLE 7

APPALACHIA PENNSYLVANIA INDUSTRIES WITH 50,000 OR MORE EMPLOYEES PROJECTED FOR 1975

Industry	1975 Employment	National Growth Characteristics (1965-1975)	Region Performance Expectatior 1965-75 relative to: Mid-Atlantic	United States
Trade	366,700	slow growth	above average	above average
Services	321,400	rapid growth	below average	below average
Government	303,800	rapid growth	below average	below average
Primary Metals	174,300	slow growth	above average	below average

TABLE 7 (Continued)

APPALACHIA PENNSYLVANIA INDUSTRIES WITH 50,000 OR MORE EMPLOYEES PROJECTED FOR 1975

Industry	1975 Employment	National Growth Characteristics (1965-1975)	Region Performance Expectation 1965-75 relative to: Mid-Atlantic	United States
Transportation, Communications, Public Utilities	134,200	slow growth	above average	below average
Construction	93,200	rapid growth	above average	above average
Apparel	82,300	slow growth	above average	below average
Electrical Machinery	79,800	rapid growth	below average	below average
Finance, Insurance, Real Estate	64,400	rapid growth	below average	below average
Fabricated Metals	62,000	rapid growth	above average	below average
Non-electrical Machinery	58,200	rapid growth	above average	below average

Source: State Planning Board working papers.

The Appalachia Pennsylvania overall industrial mix is expected to shift into the rapid growth category during the 1965-75 period, thus bringing the region into line with the rest of the Nation. Employment is projected to be distributed among rapid growth, slow growth, and declining industries in the following proportion:

Industrial Growth Category	Region Employment 1965	1975	Percentage 1965	1975
Rapid Growth	885,500	1,111,900	48	52
Slow Growth	782,600	850,900	42	41
Declining	191,300	158,700	10	7

Generally, Appalachia Pennsylvania employment expectations suggest economic improvements, but they fall well behind those for non-Appalachia Pennsylvania. For example, a differential shift analysis of Pennsylvania reveals that two-thirds of the downward shift of employment expected will come from Appalachia Pennsylvania.

The job loss expected from the industrial mix in Appalachia Pennsylvania is 20,000, while in non-Appalachia the job gain is 24,600. Thus, it is non-Appalachia Pennsylvania that contains the rapid growth industries. Moreover, non-Appalachia's fast growth industries are expected to increase that area's share of total State employment during the 1965-75 period from 53 to 58 percent while Appalachia Pennsylvania will decline from 47 to 42 percent. Clearly, of all the competitors facing Appalachia Pennsylvania, one of the most vigorous is her non-Appalachian twin lying southeast of Blue Mountain.

THE PROBLEM OF WAGES

Returning to the third economic condition mentioned earlier - the quality of employment or wage levels - the Pennsylvania situation seems to be improving by comparison with the rest of the Nation.

TABLE 8

MANUFACTURING WAGE DISTRIBUTION IN PENNSYLVANIA AND U.S. BY PERCENT

	United States		Pennsylvania	
	1958	1965	1958	1965
Low Wage (up to $2.20 per hour)	24.4	23.1	25.7	25.1
Medium Wage ($2.21 to $3.00 per hour)	50.5	52.4	47.6	47.0
High Wage (Over $3.00 per hour)	25.1	24.5	26.7	27.9

Source: U.S. Department of Labor, Bulletin No. 1312-4, Employment and Earnings Statistics for the United States, 1909-66; Department of Internal Affairs unpublished data.

In manufacturing, the proportion of high-wage earners decreased in the Nation and increased in Pennsylvania, marking a distinct improvement for the State if not for the Nation. At the other extreme, the proportion of low-wage manufacturing employment in the State decreased less than in the Nation and remained a slightly larger proportion of all employees. Thus, the progress is mixed for the State. As might be expected, much of the explanation lies in what happened in Appalachia Pennsylvania during this period.

TABLE 9

MANUFACTURING WAGE DISTRIBUTION IN APPALACHIA AND NON-APPALACHIA PENNSYLVANIA BY PERCENT

	Appalachia Pa. 1958	Appalachia Pa. 1965	Non-Appalachia Pa. 1958	Non-Appalachia Pa. 1965
Low Wage (up to $2.20 per hour)	20.8	23.1	30.0	26.9
Medium Wage ($2.21 to $3.00 per hour)	45.7	43.4	49.2	50.3
High Wage (Over $3,00 per hour)	33.5	33.5	20.8	22.8

Source: Pennsylvania Department of Internal Affairs unpublished data.

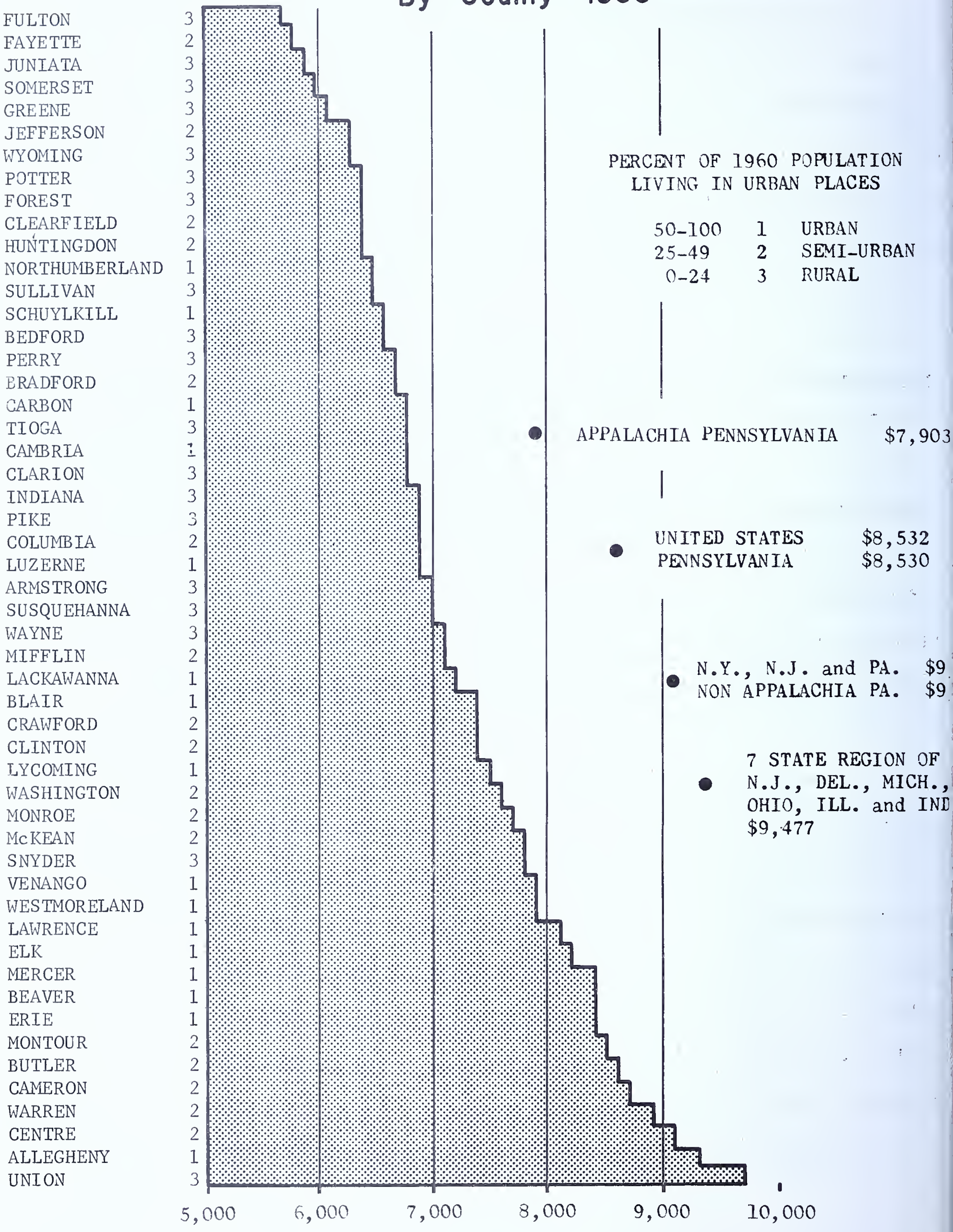
Manufacturing wage earners in Appalachia have an unusually heavy concentration in the high-wage category. Here the dominance of primary and fabricated metals, electrical machinery, and other long established and thoroughly unionized industries is apparent. Significant to the Appalachian economy is the fact that this one-third of manufacturing employees remains firm. At the other end of the wage scale, the proportion of low-wage earners increased while medium-wage earners declined - both of these changes being just the opposite of the non-Appalachian section of the State.

Since these comparisons are among manufacturing wage levels, they

CHART 10

EFFECTIVE BUYING INCOME PER HOUSEHOLD

By County 1966



Source: SALES MANAGEMENT, June 1967

deal only with 35 to 40 percent of the total non-agricultural employment in both Appalachia and non-Appalachia Pennsylvania. Data are not now available to compare wages in other industry groups, yet the per capita income figures cited earlier suggest that much of recent Appalachia employment growth has been in low-wage jobs, causing the gap between Appalachia and non-Appalachia Pennsylvania per capita income to widen. Moreover, even in Appalachia Pennsylvania there is a wide range of incomes, and high wages in a few counties raise the average.

Pennsylvania and especially the Appalachian portion have maintained a much higher proportion of manufacturing than the Nation, but this has not thrust the State ahead of the Nation in per capita income.

TABLE 10

EMPLOYMENT PROFILES (PERCENT)

	1958		1967	
	U.S.	Pennsylvania	U.S.	Pennsylvania
Mining	1.5	2.1	0.9	1.0
Construction	5.4	4.6	4.9	4.5
Manufacturing	31.0	38.2	29.3	36.9
Transportation, Communications, Public Utilities	7.7	7.9	6.4	6.4
Trade	20.9	18.7	20.7	18.7
Finance, Insurance, Real Estate	4.9	4.1	4.9	4.2
Services	13.2	13.0	15.2	14.6
Government	15.3	11.6	17.6	13.8

Source: U.S. Department of Labor, Bulletin No. 1312-4, Employment and Earnings Statistics for the United States, 1909-66; Pennsylvania Department of Labor and Industry, Pennsylvania Total Civilian Work Force, Unemployment and Employment: 1950-1966.

In Appalachia Pennsylvania, the high level of manufacturing employment has held steady while the Pennsylvania decline occurred in the non-Appalachian portion.

TABLE 11

APPALACHIA AND NON-APPALACHIA PENNSYLVANIA EMPLOYMENT PROFILES (PERCENT)

	1958		1967	
	Appalachia	Non-Appalachia	Appalachia	Non-Appalachi
Mining	4.0	0.4	1.8	0.3
Construction	4.1	4.9	4.2	4.7
Manufacturing	38.2	39.3	38.2	35.7
Transportation, Communications, Public Utilities	8.2	7.2	6.6	6.2
Trade	18.4	19.0	17.6	19.6
Finance, Insurance, Real Estate	3.2	4.8	3.2	4.9
Services	13.0	13.1	14.8	14.4
Government	10.8	12.3	13.5	14.0

Source: Pennsylvania Department of Labor and Industry, Pennsylvania Total Civilian Work Force, Unemployment and Employment: 1950-1967.

State Planning Board provisional employment projections are generall optimistic about future employment in Appalachia (although somewhat less so than the projections of certain other public and private agencies). The 1,898,000 wage and salary employment of 1967 in Appalachia Pennsylvania is expected to increase to 2,285,600 by 1975. If this projection is realized, Appalachia Pennsylvania will increase slightly its proportions of total state wage and salary employment and thereby return to the share it enjoyed in 1958.

TABLE 12

PROPORTIONS OF PENNSYLVANIA WAGE AND SALARY EMPLOYMENT

	1958	1967	1975
Appalachia	46.9	45.5	46.3
Non-Appalachia	53.1	54.5	53.7

Source: Pennsylvania Department of Labor and Industry, Pennsylvania Total Civilian Work Force, Unemployment and Employment: 1950-1967; State State Planning Board projections.

PEOPLE

Some economists assert half facetiously that the only natural resource is people since resources in nature await creative intelligence before they can be used. While the assertion may be subject to some disagreement, it is an argument which suggests why some description of Appalachia Pennsylvania's people should at least head the list of regional assets.

With about three-quarters of the area of Pennsylvania, Appalachia has been the home of a little over half the State's population. In 1950, the Appalachian section contained 55 percent; in 1960, 52 percent; in 1965, it had declined to 51 percent. Much of the change is explained by migration. Significantly, however, State Planning Board estimates for the 1960-65 period reveal an actual population decline for the first time. During the 1950-60 decade, for example, when the migration loss was some 538,000, Appalachia Pennsylvania still grew about 14,000 per year. From 1960 to 1965, however, there appears to have been a net loss of about 6,000 people per year so that now Appalachia seems to be declining absolutely in relation to the remainder of the State.

By 1975, the projected employment in Appalachia will support 5,989,800 people, which will be an absolute increase of 60,000 over the estimated 1965 total. In terms of migration, it is also a 98,700 loss of people during the

1965-75 period. Explanation of the methodology employed to arrive at these totals is included in the Appendix, but readers should realize these projections are highly optimistic since the projected rate of out-migration from Appalachia Pennsylvania is but 9,800 per year. During the 1950-60 period it was 53,800 annually, and from 1960 to 1965 it was estimated to be 52,400 per year.

During the 1960-66 period, the Appalachia Pennsylvania work force remained constant at 2,233,000, while the non-Appalachia work force increased by 108,000. The increase in Appalachia employment during this period was 26,000 - enough to lower unemployment rates for the 1960 work force, but apparently not sufficient to absorb new entrants into the economy.

Still the 1960 Appalachia Pennsylvania population of 5,930,784 is more than that of 42 of the Nation's states in that year, and consequently represents considerable human potential. The most recent census data describing pertinent characteristics of these people are for 1960, and therefore are subject to some revision. In 1960, the State lagged behind other states in median school years completed (it was 38th) and the level of education in Appalachia Pennsylvania was slightly below the State average.

TABLE 13

YEARS OF EDUCATIONAL ATTAINMENT OF PERSONS 25 AND OVER, 1960
(PERCENT OF TOTAL)

	1 to 8 Elementary School	9 to 12 High School	13 or More College
Pennsylvania	39.81	45.39	12.59
Appalachia Pa.	40.41	45.55	11.62
Non-Appalachia Pa.	39.19	45.22	13.66

Source: Adapted from 1960 Census by the Appalachian Regional Commission.

In the years since that census was taken, expenditures per pupil for education have increased by one-third; school administration has been reorganized; more large schools with better course offerings have been opened; and vocational-technical schools and community colleges have been established to insure wider educational opportunities. While these efforts are of immeasurable importance to students, the results in the 1970 census may not reveal a noticeable statistical improvement if the better educated people are leaving the State.

The occupational profile of 1960 suggests that is just what has been happening - the percentage of white collar workers, usually the better educated workers, lags considerably behind the Nation in both Appalachia and non-Appalachia Pennsylvania.

TABLE 14

OCCUPATIONS OF THE EMPLOYED IN 1960
(PERCENT)

	United States	Appalachia Pa.	Non-Appalachia Pa.
White Collar Workers	46.4	37.44	41.45
Blue Collar Workers	35.9	45.68	41.43
Service Workers	10.2	9.78	10.34
Farm Workers	7.6	2.89	1.91
Occupation Not Reported		4.21	4.98

Source: Statistical Abstract of the United States, 87th Edition; Appalachian Regional Commission, Appalachian Data Book.

Significantly, white collar employment in Appalachia Pennsylvania was only four-fifths the national proportion. In effect, the proportions of white and blue collar workers in the Nation are reversed in Appalachia. Even more important to the question of whether Appalachia Pennsylvania is holding its share of the better educated is the past change of occupational groups. The most recent comparison that can be made is over the 1950-60 decade.

TABLE 15

PERCENT CHANGE 1950-60 BY OCCUPATIONAL GROUPS

	United States	Appalachia Pennsylvania	Non-Appalachia Pennsylvania
White Collar			
Professional, Technical, etc.	64.8	29.88	37.75
Managers, Officials & Proprietor	9.9	- 6.41	- 2.58
Clerical, etc.	24.2	14.96	26.05
Sales Workers	14.6	9.04	15.40
Blue Collar			
Craftsmen & Foremen	9.9	- 1.95	0.57
Operatives	- 5.6	-16.88	- 3.40
Laborers except Farm & Mine	- 1.2	-21.69	-21.63
Service Workers			
Private Household	37.3	5.05	- 2.20
Other Service	30.5	19.89	19.19
Farm Workers			
Farmers & Farm Managers	-35.3	-34.45	-38.30
Laborers & Foremen	-17.7	-34.95	-40.82

Source: Appalachian Regional Commission and Statistical Abstract of the United States, 87th Edition.

Among white collar workers who are looked to for leadership in economic matters, the Appalachia Pennsylvania experience was poor and lends weight to the argument that Appalachia suffered a "brain drain" as well as an exodus of the unemployed. This loss of better educated people is at least superficially related to the question of job quality cited earlier in the discussion of wage levels. As the Nation's economy operates today, it is the professionals, the technicians, the managers, and the officials who germinate new ideas that result in new activity. In both the private and public sectors, they put together new programs, new businesses, and widened activity. Therefore, their absence may prove to be as significant an impediment to economic vigor as any other local condition.

As if to overcome the loss of educated people, more effort is being made to train people better, especially at the college level. Between 1960 and 1966, the number of college graduates in Pennsylvania rose from 29,497 to 41,972 (over 50 percent of the 1966 total was in Appalachia) and State appropriations to colleges almost trebled, from $36.1 million to $99.0 million. Even with these greater State educational efforts, it remains the job of localities to attract and hold the growing number of potential leaders.

CULTURAL INTERESTS

An important dimension of the effort to attract and hold these young, well-educated graduates of the State's universities and colleges is the cultural quality which various sections of the Commonwealth possess. For these young people who may be offered several good jobs in different sections of the Nation, the quality of after-work living may be decisive in weighing different opportunities. Here the availability of music, theatre, art, museum, and library groups and resources may be as important to the graduate and his wife (as well as to other residents of the community) as sports and recreation facilities will be to the children they raise.

One survey revealed that there were at least 308 organizations in Pennsylvania Appalachian communities involved in historical societies, music groups, art centers (including painting, sculpture, and print making), museums, libraries, theatre groups, and similar organizations. One or more of these groups have sponsored arts festivals in at least ten Appalachian communities during 1968.

No accurate estimate of the numbers of people participating in these groups is available, although an estimated 8 million people attended events which received financial assistance from the Pennsylvania Council on the Arts in 1967. During that year, the Council had less than $90,000 to grant to various groups. Almost all of the support and financing of these artistic groups comes from local people and institutions. In many cases, local businesses contribute heavily out of the conviction that cultural activities enrich the lives of their employees. And local development officials have taken the cue from businessmen by emphasizing the artistic and cultural climate of their areas to prospective industries.

MINERALS

Of the $903.4 million Pennsylvania mineral production in 1966, three-quarters of the total came from Appalachian counties. Appalachia Pennsylvania accounted for virtually all of some minerals and lagged behind the non-Appalachian portion of the State only in cement and limestone production.

Current production figures at best reveal part of the picture of minerals - the historical part. In some cases, they are perhaps a reliable indicator of the future as well, but there are other minerals such as salt and uranium which do not show up in current production figures although there is a

TABLE 16

PENNSYLVANIA MINERALS

Mineral	1966 Production	Percent in Appalachia
Cement	42,963,943 barrels	26.9
Clays	3,293,114 tons	75.0
Coal - Anthracite	12,941,264 tons	100.0
Coal - Bituminous	81,442,801 tons	100.0
Copper	3,187 tons	
Lime	1,585,088 tons	61.2
Natural Gas	90,914 million cu.ft.	100.0
Natural Gas Liquids	5,074 thousand gallons	100.0
Peat	52,912 tons	100.0
Petroleum (crude)	4,337 thousand barrels	100.0
Sand and Gravel	59,087,619 tons	70.0
Sandstone	2,560,983 tons	
Limestone	56,526,636 tons	45.6
Zinc	28,080 tons	

Source: Pennsylvania Bureau of Topographic and Geologic Survey

very promising future for them. Here the important ingredient is not necessarily "known reserves", the indicator most often cited when referring to coal, oil or gas; rather what is happening in research laboratories is probably of more consequence in foreseeing use of previously unexploited mineral deposits.

About an eighth of the State - the northwestern corner - is underlain by salt deposits which have yet to be exploited commercially. Among geologists there is a confidence that the combination of advancing technology and the demands of the chemical industry will bring some of them into use in the near future. The Pennsylvania Bureau of Topographic and Geologic Survey has surveyed these deposits, and is preparing a report that describes in detail the development potentialities these deposits represent.

Uranium, the other undeveloped resource for which there is considerable optimism because high grade ores have been discovered, has been found in Montour, Columbia, Northumberland, Lycoming, and Schuylkill Counties. The 65 prospects uncovered to date have been too small to mine, but geologists predict that in the near future there will be either a large strike or enough additional small ones to make mining profitable.

Many of Appalachia Pennsylvania's resources have had long standing importance in the nation's industry. Coal - both anthracite and bituminous - has been a mainstay of the economy, but because of the use of other fuels anthracite has been declining for decades. Bituminous, while also declining over a long period, has dropped less drastically than anthracite, and has actually shown increasing production over the last several years. And the future for bituminous coal is considered to be fairly good: strip mining, with its lower production costs than underground mining, is expected to continue increasing its share of total production (currently about one-third); deep mining of previously undisturbed coal seams (two to three thousand feet below the surface) is becoming economically feasible for several reasons, including new mining technology and the development of "mine-mouth" electrical generating facilities. Bituminous coal reserves are extensive in Appalachia Pennsylvania - an estimated 56 billion tons, of which at least half are recoverable with today's technology.

Because these coal reserves are so extensive in Appalachia Pennsylvania, it may be useful to cite the speculation of Mr. George Fumich, Jr., Director of the Office of Coal Research in the U. S. Department of the Interior, about the future of coal as an industry. Writing in the March 1968 issue of Appalachia about the 1975-80 period, he said.

> "Coal-mining companies of this period will be the center of a vigorous and growing industrial complex based on coal...Large-scale conversion plants will convert Appalachian coal to gasoline at an economically attractive price. Co-products from the plant will include high-quality jet fuel, diesel fuel, furnace oil, and a 'coal resid' or char. In this process a high-quality, low-sulfur, premium boiler fuel can be produced and made available to a nearby power plant. Certainly we are going to sell electricity - the atom notwithstanding. The power may be produced in a coal energized fuel cell or perhaps in an electrogas-dynamic generator, or from other processes under consideration. We will need cheap power to produce acetylene, if it is to be produced at attractive prices. The acetylene would form the basis for a family of plastics. The plastics in turn can be used locally for plastics fabrication, or used along with Appalachian timbers to produce a wide spectrum of products. These developments are nearing realization sufficiently for us to expect the first commercial coal-to-gasoline plant to be built in the country before 1975. A nearly similar situation exists for gas."

Clay deposits lie under the bituminous coal deposits throughout the western part of the State, and range from fairly low quality to valuable high alumina clays used in high quality ceramic production. Fire clays have figured prominently in the economics of counties in the Allegheny Plateau for many decades; here some of the Nation's largest refractories are located, and though reserves are thought to be limited, continued production of such items as sewer tile, furnace lining, and brick at current levels is expected for many years. (Fire clay accounts for about half of all clay mined in Pennsylvania.)

Two promising developments suggest greater demand for the low-quality clays that abound in the Allegheny Plateau. One is the use of these clays as light-weight aggregate in concrete. Through a roasting process, the clay forms hollow pellets of rock-like quality which results in lighter weight concrete when used as a substitute for conventional aggregates. The other unrealized potential of these low-quality clays appears to be in the manufacture of aluminum. Close observers of natural resources development believe that within a few years there will be a technological breakthrough making it profitable to manufacture aluminum from these clays, thereby dramatically altering the value of these deposits.

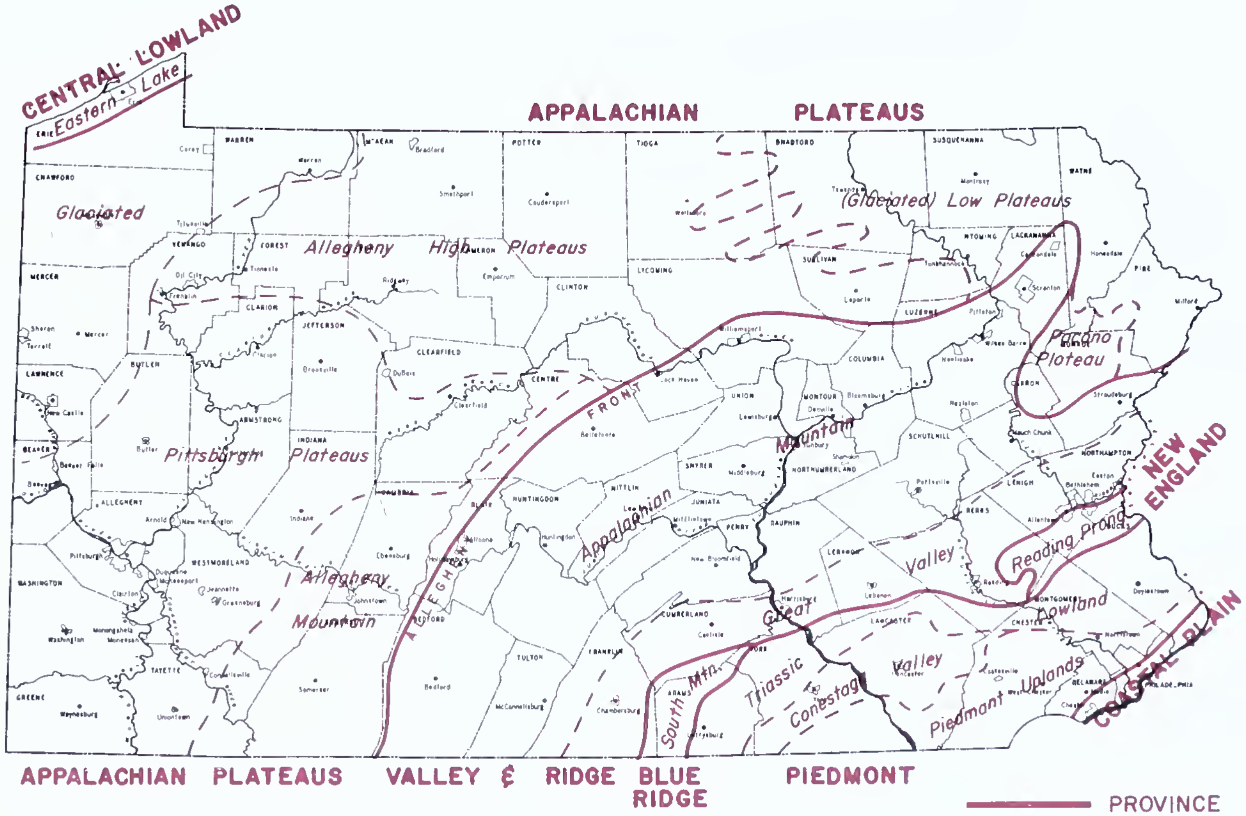
Future production of oil and gas in Pennsylvania is expected to continue at approximately the current level, and geologists consider that there are areas somewhat south of present fields where formations show favorable signs of new production.

Sand and gravel occur extensively in both the northeast and northwest sections of the State that were covered by glaciers during ice ages. Where development is particularly promising these sand and gravel deposits will be in great demand. One limitation on the use of these deposits is the expense of transportation (by rule of thumb the outer limit of economical delivery is 30 miles); therefore, sand and gravel await the arrival of development before deposits can be exploited.

Limestone deposits are used for cement rock and lime, flux stone, and crushed stone. An east-west line from approximately the northern boundary of Lawrence County across the State separates areas of deposits from those with none. South of this line are found, in both the Appalachian and non-Appalachian areas of Pennsylvania, the cement plants, the crushed stone quarries, and the flux stone mines. Production in Appalachia Pennsylvania counties during the next decades is expected to follow trends of the recent past. Flux stone, which is used in manufacture of iron and steel, will be more widely available in western Pennsylvania in the future than today because manufacturing requirements are changing toward flux stones containing higher magnesium oxide. Such limestones are common throughout areas of limestone deposits.

Peat deposits - used for landscaping as peat moss - occur in the sec-

GROUND WATER AREAS OF PENNSYLVANIA



GLACIATED REGIONS

Unconsolidated sand and gravel deposits; water-table conditions : highest yields associated with thickest deposits; buried channels and stream valleys produce best results; excellent yields available.

APPALACHIAN PLATEAUS REGION

Thick sequences of sandstone and shale ; water-table and artesian conditions: best results obtained in low-relief stream valleys; good to excellent results obtainable.

APPALACHIAN MOUNTAINS

Sandstones, shales and limestones; water-table and artesian conditions: yields are extremely variable ; quartzites produce poor results, sandstones and shales - moderate yields, and limestones offer the best possibilities; low-relief stream valleys produce the best results.

GREAT VALLEY AND GONESTOGA VALLEY

Northern half underlain by shale; water-table conditions: poor to good yields (2-75gpm) may be expected; low relief valleys produce best results; drilling depth should not exceed 300 feet.

Southern half underlain by limestone and dolomite; water-table conditions: extremely high yields (100-800 gpm) common; drilling depth not to exceed 275 feet.

TRIASSIC REGION

Red shales, sandstones and conglomerates; artesian conditions common: moderate to high yields (50-200gpm) may be expected; maximum yields obtained from wells drilled to 500 feet.

POCONO PLATEAU

Sandstones, conglomerates and shales water-table conditions: moderate t high yields possible; low-relief strea valleys produce best results.

COASTAL AND CENTRAL LOWLANDS

Unconsolidated sands and gravels; water-table conditions: excellent aquifer.

PIEDMONT UPLANDS
SOUTH MOUNTAIN
READING PRONG

Metamorphic and igneous rocks; water-table conditions: very low yields (0-25gpm) may be expected; drilling depth should not exceed 150 feet.

tions that have been glaciated. Pennsylvania's production is second in the Nation and expected to remain in that place in the future.

Iron deposits of 16 to 20 percent iron content abound in the Ridge and Valley Province and are now not economical to exploit. (The two active iron ore mines in Pennsylvania today lie outside Appalachia in Lebanon and Berks Counties.) At present, the economics of iron and steel production make it cheaper to import high grade ores than to use these Pennsylvania deposits.

Quartzite and sandstone are also widely available in the Ridge and Valley Province, and there is speculation that either of these minerals may come into use in the development of non-skid surfaces for highways.

Glass sandstone - used in the manufacture of glass products - occurs in this same area, and the prognosis is for continued production at current rates.

Ground water is a frequently ignored natural resource, but in Appalachia it is unusually significant because it is less likely to be contaminated than surface water. In addition, ground water is less susceptible to climatic changes than surface supplies, and can therefore be considered more reliable. There are generally large untapped reserves throughout Appalachia - reserves that are suitable for large water using industries. Because of changing geologic features, these reserves are found in different conditions ranging from the enormous pools found in the unconsolidated glacial materials of the northeast and northwest to the underground streams in the limestone valleys of the Ridge and Valley Province.

Surface water problems in many areas of Appalachia Pennsylvania have enhanced the value of ground water resources. Both acid mine drainage and biodegradable wastes contaminate the State's rivers and streams. The more extensive contaminant - sulfuric acid that comes from weathered coal seams washed by runoff waters - pollutes an estimated 2,300 miles of the State's streams, most of them in Appalachia Pennsylvania. The Division of Sanitary Engineering of the Department of Health estimates that daily at least 2,750 tons of acid are dumped into these streams from deep mines, refuse piles, and strip mines.

Municipal and industrial wastes also create extensive problems in Appalachia Pennsylvania rivers and streams. The Division of Sanitary Engineering estimates that 464 communities in the 52-county Appalachia section need sewage treatment and/or collection systems that will cost about $290 million for treatment plants and about $90 million for sewers. Another 138 communities will have to upgrade their systems when (as is expected soon) water quality standards are raised by the State Sanitary Water Board.

Similarly, of the 1,100 industries discharging wastes into the State's rivers, about 934 are providing limited treatment which will have to be improved as standards are raised. Many pulp, paper, and steel mills now discharge wastes that are generally difficult and expensive to treat.

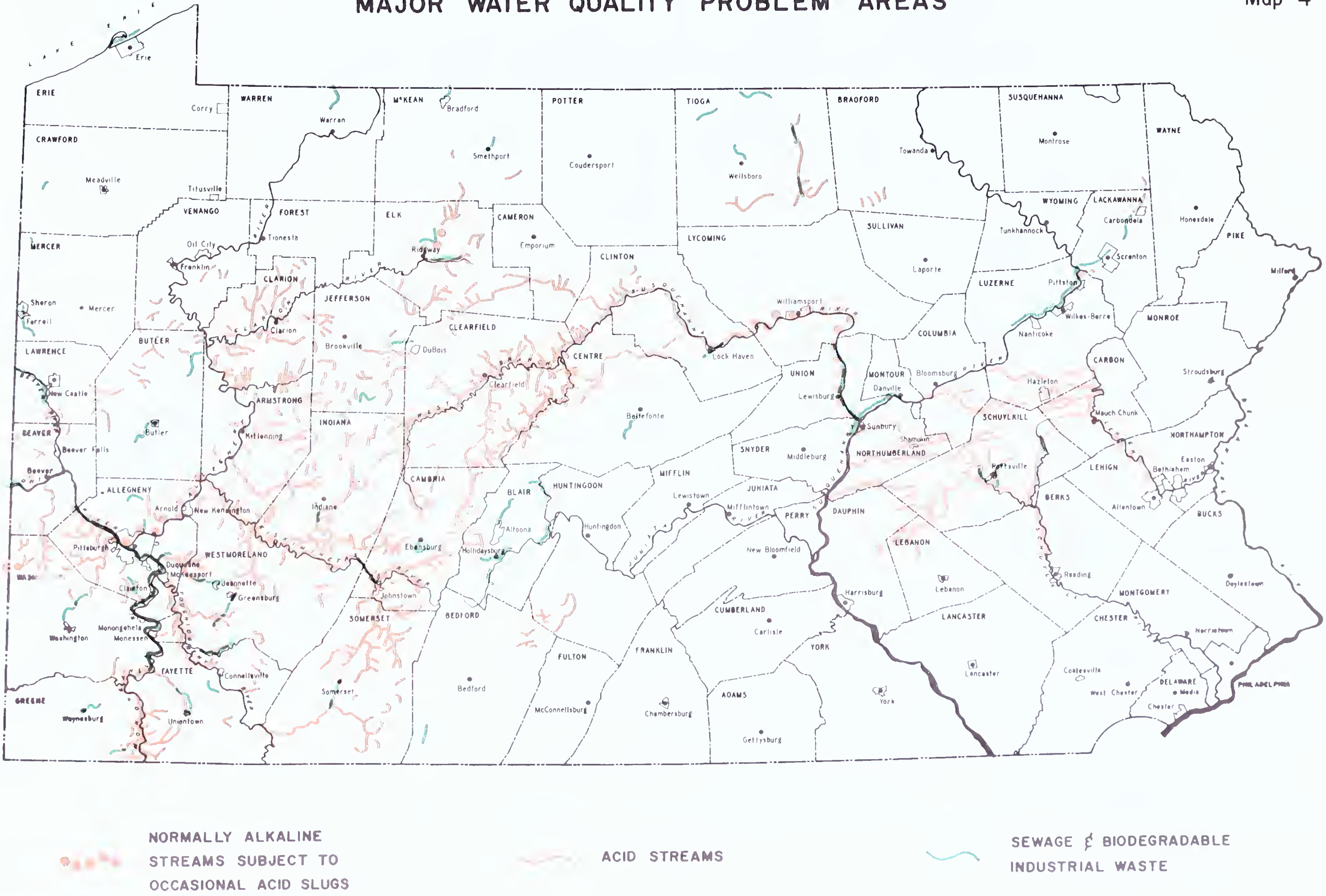
Of the many streams affected by mining, municipal, and industrial sources of pollution, only the most significant are shown on the map. The occurrence of both mining and municipal or industrial pollution in the same areas results from the past practice of allowing communities and industries to dump untreated wastes into acidic streams. As acid mine drainage pollution is abated, these practices are to be stopped.

Coal mining has created problems which are peculiar to the coal regions and which interfere with future progress and prosperity. These problems include:

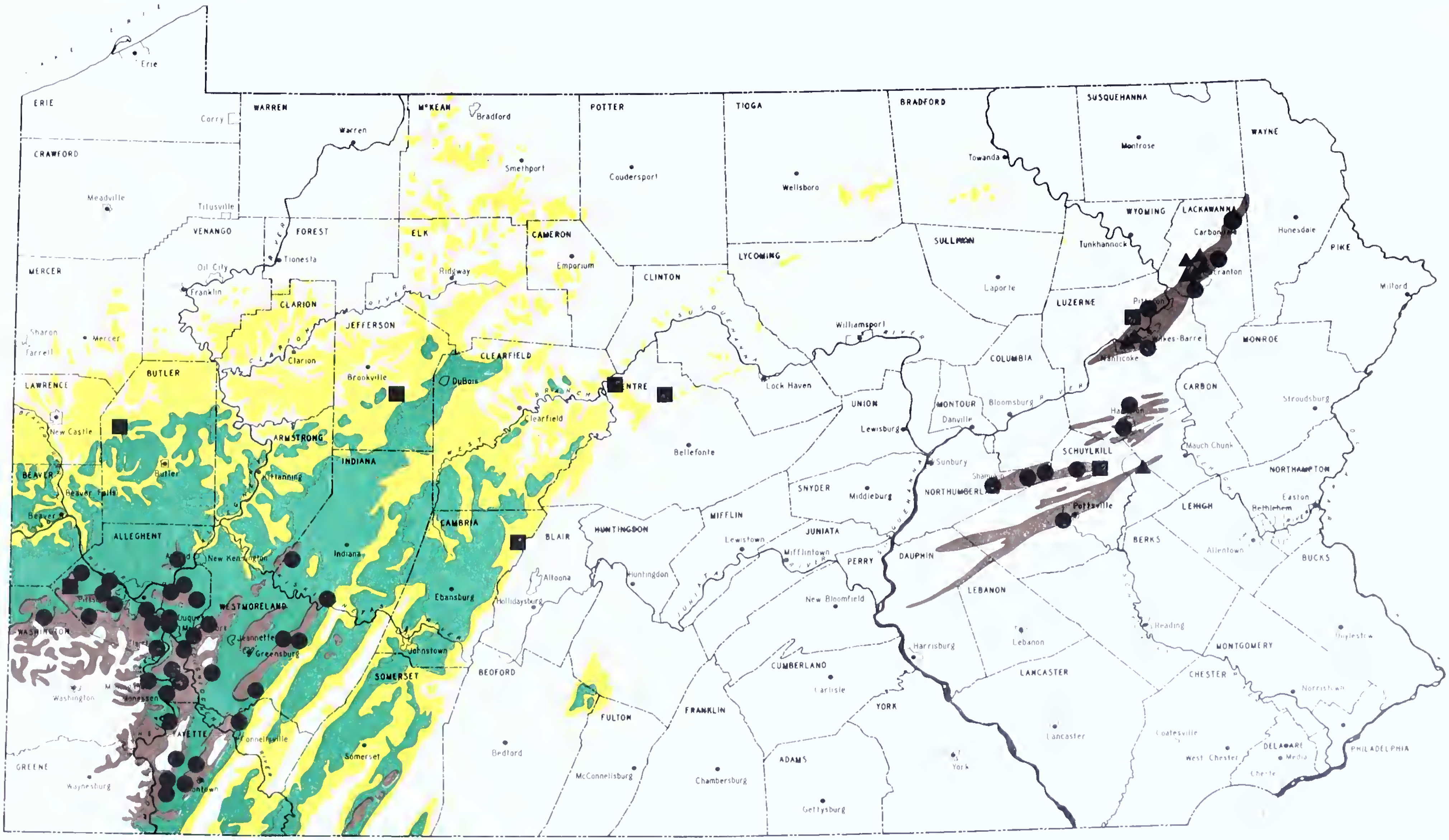
1. Underground mine fires;
2. Mine subsidence and surface caving;

MAJOR WATER QUALITY PROBLEM AREAS

Map 4



COAL MINING PROBLEMS



🟫 CLASS I

🟨 CLASS II

🟩 CLASS III

● MINE FIRE PROJECT

▲ MINING SUBSIDENCE PROJECT

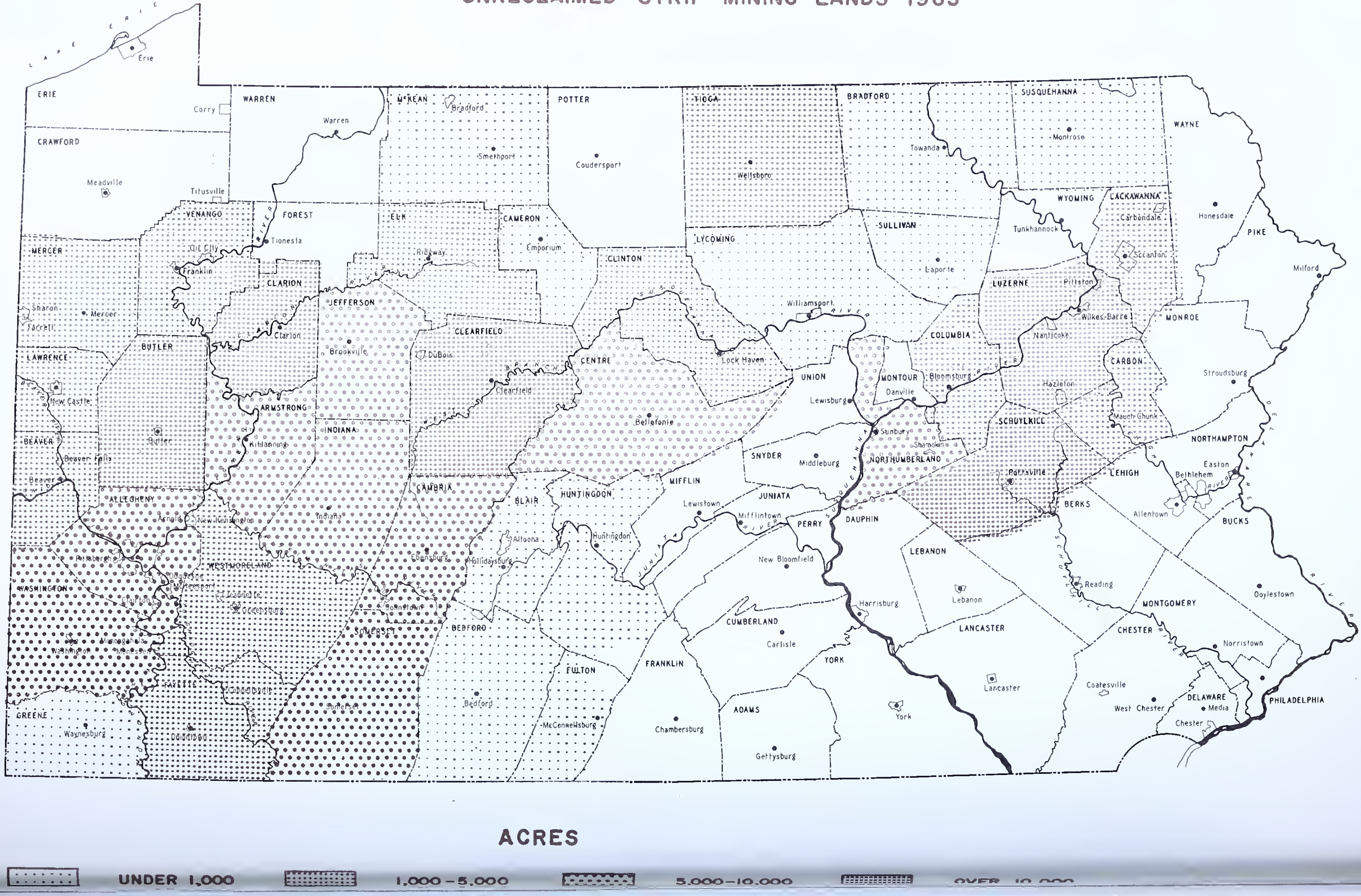
■ STRIP MINE RECLAMATION PROJECT

PREVALENT PROBLEMS IN ALL AREAS:
ABANDONED DEEP MINES
BURNING COAL REFUSE BANKS
ACID MINE DRAINAGE

ADDITIONAL PROBLEMS IN CLASS II
ABANDONED STRIP MINES
ADDITIONAL PROBLEMS IN CLASS I
ABANDONED STRIP MINES
MINE FIRES
MINE SUBSIDENCE

COAL MINING PROBLEMS

UNRECLAIMED STRIP MINING LANDS - 1965



3. Abandoned strip and deep mines;

4. Burning and non-burning culm piles;

5. Acid mine drainage pollution.

Corrective efforts have been initiated by the Commonwealth, working in cooperation with Federal and local agencies.

AGRICULTURE

Farming is one of the most creative uses of natural resources. Capable farmers, under normal conditions, not only raise bountiful crops but they leave the soil as productive as they found it. This is an unspoken goal of all progressive farmers but, unfortunately, one which some are never able to achieve. In western Pennsylvania, for example, early settlers had great hopes for the shale derived soils in counties surrounding Pittsburgh. These had a rich cover of leaf mold which was quickly dissipated once the trees were removed, leaving these farmers with considerably poorer land than that found in some of the limestone rich valleys of the Ridge and Valley Province to the east.

A soils map of Pennsylvania quickly reveals the same message that crop and livestock statistics disclose: soils for farming in Appalachia Pennsylvania are generally less productive than those in the non-Appalachian sector. With over three-quarters of the Commonwealth's area, Appalachia contains two-thirds of the farms, yet these farms account for only 51 percent of agricultural receipts (1966). The basic potential of the soil - called land capability by agricultural specialists - accounts for much of the difference in productivity. Only 35 percent of Appalachia Pennsylvania land meets standards for the top three classes of land capability - the classes that, with proper treatment, are capable of sustained production over long periods of time. Forty-five percent of non-Appalachia Pennsylvania land falls within these three classes.

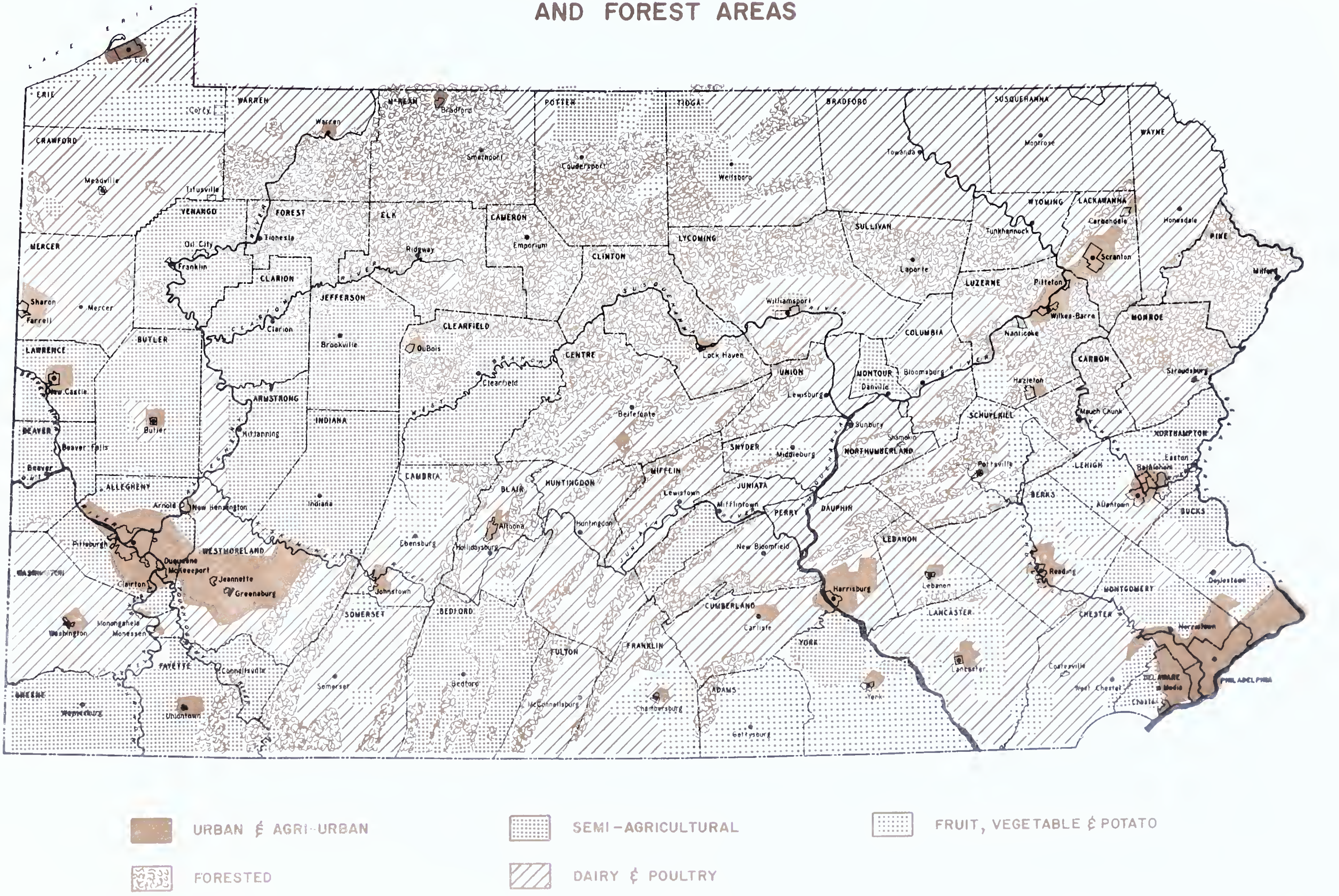
Poor soils and the rugged terrain of the Ridge and Valley Province and the Allegheny Plateau have been distinguishing features in most descriptions of Appalachia.

The number of farms has been declining since the turn of the century as families living on marginal or submarginal farms have found it impossible to produce enough to make a living. Between 1950 and 1960, farm employment declined in Appalachia Pennsylvania by 36,000; this loss represented more than a third of those persons that were employed in agriculture in 1950. Non-Appalachia Pennsylvania lost 17,000 farmers, about a quarter of its 1950 total. The decline in the number of farms and farmers does not indicate the demise of farming but can reflect a proper adjustment to economic trends. During the period of reduction in productive farm units, farm receipts increased from $805 million in 1958 to $937 million in 1968, a gain of $132 million. It is anticipated that this approximately billion dollar annual agricultural income will continue in the foreseeable future and will have no small multiplier effect on the Commonwealth's income. The total economic impact of agriculture cannot be minimized.

The lower number of farmers and the greater mechanization of today's agriculture have reduced the investment in labor and increased the expenditures for equipment. To assure an economic return on machinery by more efficient operations, farm sizes have been increasing through consolidation of small units. The squeeze on small farmers has been particularly pronounced since farm prices failed to rise with costs over the last two decades.

The decline in the number of family farms has shown little sign of abating. In addition, Pennsylvania farmers have suffered five straight years of drought (1962-1966) which cut seriously into production of both livestock and crops. The droughts forced many farmers out of business and discouraged others from starting agricultural operations.

GENERALIZED AGRICULTURAL AND FOREST AREAS



The State Department of Agriculture estimated a loss of 39,000 farms in Pennsylvania since 1958; 28,600 of these are in Appalachia. Crop and pasture land declined 1,100,000 acres, 826,000 acres of which were in Appalachia. These losses reflect a continuation of the pattern existing over the last 20 years, a period during which the Commonwealth lost 87,000 farms and farm acreage decreased by 26 percent. However, many farms reported as going out of production were incorporated into other farming operations. The average farm size increased from 89 to 137 acres between 1947 and 1967. Much of the crop and pasture land that went out of production was either marginal or submarginal land. This type of land does not offer a base for an economical agricultural operation. Such land in most cases should never have been used for agricultural purposes.

Pennsylvania farmers who survived the five-year drought enjoyed a bountiful year in 1967 when ample rain resulted in record corn and other field crops in most sections of the State. Even so, the family farm as an economic unit appears to be in steady decline. This decline may continue unless substantial revisions of Federal agricultural price supports occur.

Yet even with continuing losses of farms and the inability of many farmers to earn a sufficient living in agriculture, there is a notable reluctance of farmers to move from the country. Indeed, industries are being attracted into rural areas where part-time farmers bring a high mechanical aptitude and tradition of hard work to the labor pool.

Many counties will remain predominantly agricultural in future years, and of the 67 in the State, 16 appear to have a very high farming potential. Four of them, Bradford, Butler, Crawford, and Erie, are in Appalachia Pennsylvania. Of the remaining Appalachia Pennsylvania counties, 36 have moderately high potential, while only 12 are considered to have low potential. These ratings apply to normal farm activity, excluding timber production.

TIMBER

Timber, like farming, is a recurring resource when managed properly. With the days of the timber baron past, over half the State is used for commercial forests - forests in which owners follow good management practices to insure continued timber production. Of the 26.7 million acres in commercial forests, 91 percent is in Appalachia Pennsylvania.

Because timber is a recurring asset, it is measured in more than simple reserves or un-cut stands. Of importance is whether replacement ratios are being observed in cutting programs. Because wood consuming industries use particular kinds of woods, the type of species in a forest is also important. Thus, much in the same fashion that land is classified by its capability, forests are rated for their desirability and potential.

The "desirability index composite" prepared by the Pennsylvania Department of Commerce shows that many Appalachia counties have excellent prospects for wood using industries. In fact all of the 19 given the excellent rating are in Appalachia.

While forestry employment is small, employment in forest based industries is substantial (6 percent of Pennsylvania manufacturing employment) and is growing. The Pennsylvania Department of Commerce has identified areas suitable for specific wood using industries located so that the forests will meet their needs. Thus, a program of balanced cutting and growth would be achieved.

Since Pennsylvania forests are predominantly hardwood (about 8 percent are in softwoods) there is continuing concern to find more uses for hardwoods. The Appalachian Regional Development Act Amendments of 1967 authorized $2 million for research, studies, and demonstrations investigating uses of Appalachia hardwood products. Already to a limited extent some hardwood fibers can be used in pulp production, although softwoods still dominate this industry.

uniquely adapted to the needs of an industrializing economy which required large movements of coal, iron ore, sand, gravel, clay, and timber cargoes, and they continue to be the superior means of transporting such bulk items. And in the absence of automobiles and airplanes railroads also were uniquely suited to moving large numbers of people.

Today's economy only partially has the characteristics of 19th Century industrial America. Today's products have a high value when compared to weight in contrast to the low value to weight of products from rolling mills, coal mines, and quarries. Thus, what is often called "light manufacturing," which concentrates on finished products to meet changing consumer demands, has different transportation requirements than does the mill producing its raw materials. Growth of both durable and non-durable light manufacturing is in the ascendancy in today's economy, while slower growth is predicted in mining, the manufacture of primary metals, and other bulk cargo industries.

As the Westinghouse Air Brake Company, consultant to the Pennsylvania Department of Community Affairs, noted in its analysis of the Keystone Corridor, "a manufacturer is presented with a trade-off between inventory costs and premium costs for high-speed transportation. /He/ can meet the demand for his product near major market centers throughout the country, and utilize low-cost, low-speed transportation. Or he can drastically reduce the number and size of his stockpiles, and can utilize high-speed, high-cost transportation either for directly filling orders or for maintaining adequate levels in his minimal inventory system. If inventory costs are high in relation to high-speed transportation costs, the advantage lies with the low-inventory high-speed system. If inventory costs are low in relation to high-speed transportation costs, the advantage lies with a high-inventory low-speed system."

The most prevalent hardwood species (based on cubic foot volume) are northern red oak, red maple, chestnut oak, black cherry, sugar maple, white oak beech, aspen, ash, and other red oaks. Hemlock and white pines are the leading softwoods. And the Department of Commerce reported in Location Guide for Fores Based Industries in Pennsylvania that "There is a favorable balance of growth over drain for most classes of timber in the Commonwealth...It is estimated that only 32 percent of the growth is currently (1965) being utilized."

To find uses for the remaining 68 percent of Pennsylvania timber, this same study matched forest resources with appropriate industries, taking into consideration economic constraints such as markets, transportation, and materials. This guidance has helped local development officials to be selective in their industrial development efforts.

TRANSPORTATION

Changing economic trends underlie the dynamic changes in transportation occurring in Pennsylvania today. The decline of railroads, the upsurge of air travel, and the constant improvement of the State's highway system can be viewed as elements in the same process. Historically, the Conestoga Wagon of Lancaster County, the stage coach, the mounted courier, and the canal system fell victims to the railroads.

At the heart of the transportation system is its ability to serve the peculiar needs of commerce, and in the 19th Century this was as true as today. Both the horse-drawn wagon and the canal barge were important parts of a developing economy, but wagons had severe load limitations while barges were slow and dependent on canals frozen shut for three or four months a year, and neither had the speed of the steam engine pulling loads on railroads. Railroads were

Low weight to cost ratios and high obsolescence of tools and machinery, appliances, electrical equipment, computers, and transportation equipment have turned many manufacturers to motor truck transportation and merchandize rail service. They specialize in rapid service which has become a crucial element of inventory control for manufacturers and retailers alike. Thus, the small manufacturer of today may be more concerned about the availability of overnight delivery to Cleveland or New York City than about the presence of a rail siding. To compete for those markets, he must be able to guarantee speedy delivery or suffer the diseconomies of high inventory costs.

Railroads also have suffered losses of bulk cargoes as pipelines have been developed to transport petroleum and refinery products, and other bulk items converted to a slurry consistency are also pumped through the Nation's pipelines. Long-distance high voltage transmission lines from mine-mouth generating plants reduce coal shipments.

The relative decline of labor-intensive industry has probably contributed to the falling importance of railroads for passenger transportation. The plants of large employers and the homes of their employees are less densely concentrated today than in the past, thus reducing the efficiency of rail as a means of getting to and from work. More often, the new large factory is located in the suburbs with a large parking lot for employees' cars. But of controlling importance probably is that labor-intensive industries usually characterized by low-wages and the need for cheap transportation for employees are not growing significantly nationally. Jobs with higher wage rates are, and people with more money regularly choose to pay for more personal convenience in transportation - meaning private automobiles.

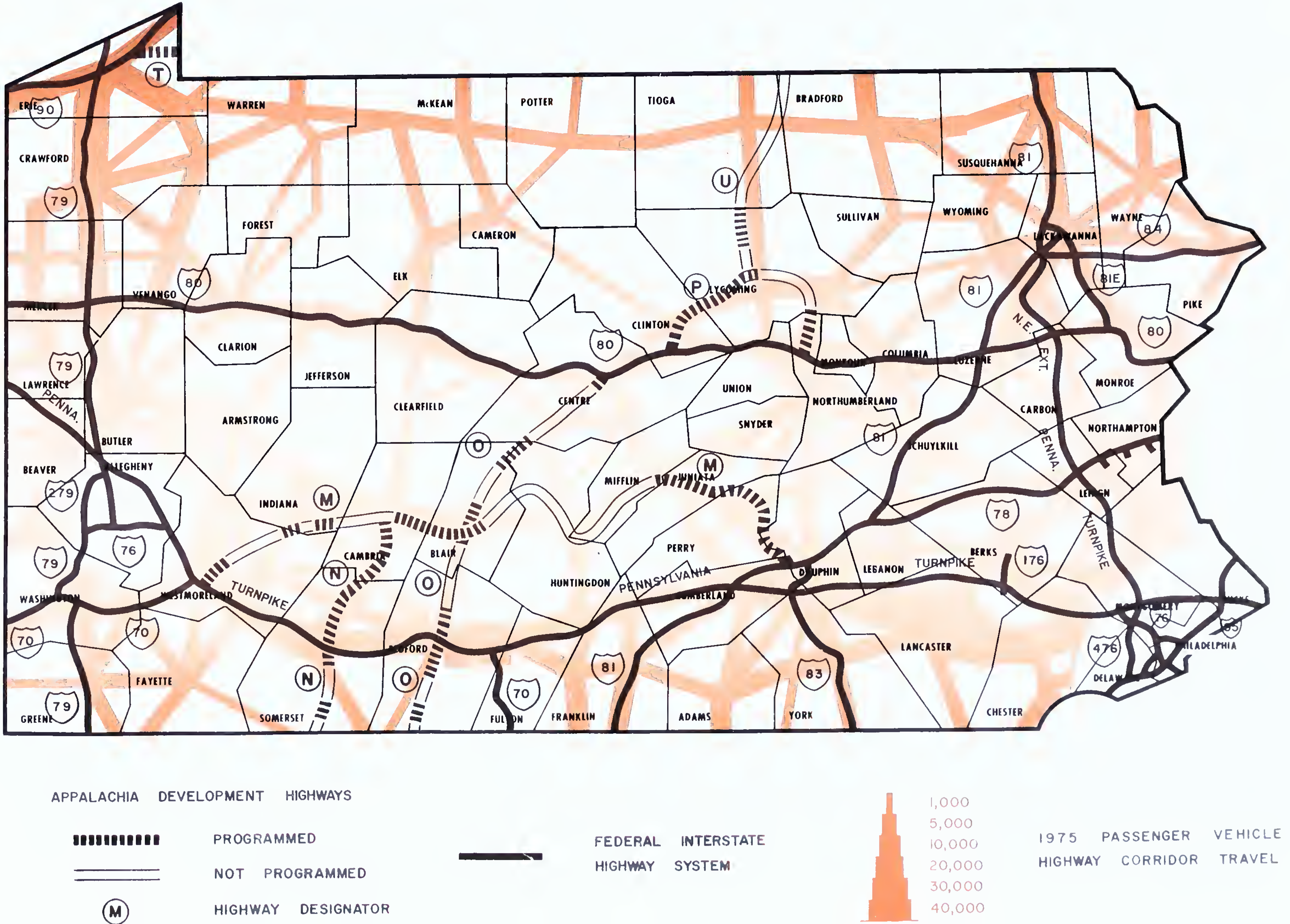
Inter-city travel by railroad has declined because of the construction of better automobiles and highways, and because of the greater speed of air transportation. By 1963, the Nation's airlines were generating more passenger miles than both railroads and bus lines. An analysis by the Port of New York Authority found in that year that 63 percent of domestic air travel was for business, which emphasizes the fact that the growth of today's air travel is related to the changing needs of the economic system.

Yet the decline of rail travel may be reversed between certain metropolises where air traffic congestion has already reached the danger level. High-speed rail service is being planned in the Northeast Corridor from Washington to New York and Boston to handle some of this movement of people, while the Keystone Corridor of Pennsylvania is a proposed new high-speed freight and passenger rail route from Philadelphia to Harrisburg, Pittsburgh and points west.

The shifts in modes of transportation have been significant to the fortunes of Appalachia Pennsylvania. Communities found themselves at a distinct transportation disadvantage when competing with other regions for new business and industry. Consequently, a major emphasis of the Appalachian Regional Commission has been to bring communities abreast of the rest of the Nation by promoting better highway and airport facilities. About four-fifths ($111 million) of the Federal funds allocated to Pennsylvania by the Appalachian Regional Commission is for the 491-mile system (442 miles require construction) of Appalachian Development Highways. Unfortunately, this amount is sufficient to construct only 175 miles of the system; the remainder must be funded by other highway programs.

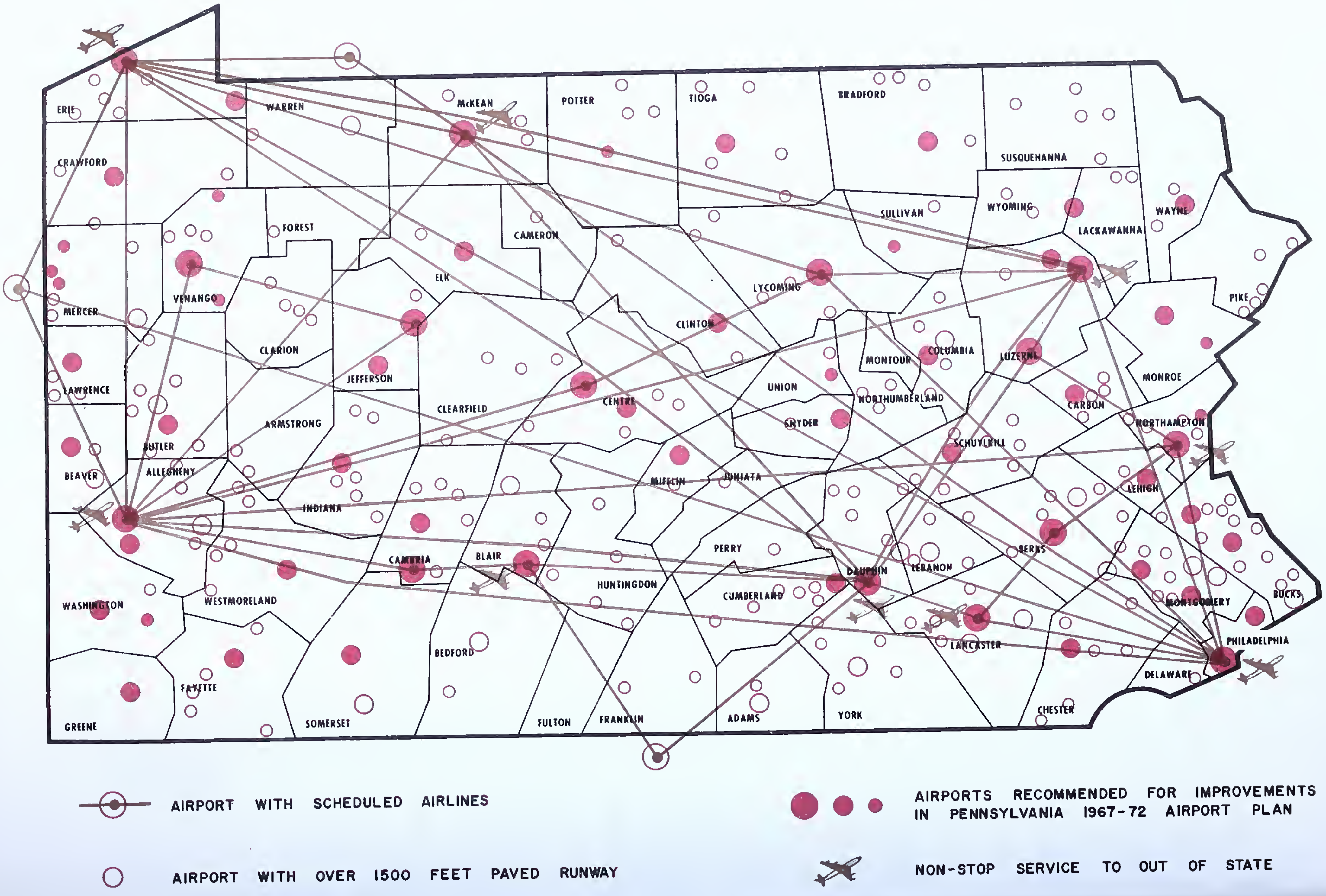
Pennsylvania has the fourth busiest highway system in the Nation, a rank of importance because it implies much service to the business community.

APPALACHIA CORRIDORS AND INTERSTATE HIGHWAYS



Map 8

AIR TRAVEL FACILITIES IN PENNSYLVANIA



This rank will be maintained through improvements of which the Appalachian Development Highways are an important element. Over the 1967-73 period, the Department of Highways projects construction and reconstruction of 13,130 miles of highways at a cost of $3.9 billion. Of this amount, $1.9 billion will be spent in Appalachia Pennsylvania for 9,470 miles of roads. And by 1973, the Interstate Highway System is due to be completed in Pennsylvania. Soon, most Appalachian communities will be able to boast overnight delivery via truck to metropolises of both the eastern seaboard and the Great Lakes.

In air transportation, Pennsylvania ranks 8th in the number of registered aircraft, a rank stimulated in part by being the home of one of the pioneer small plane manufacturers, Piper. Pennsylvania has 16 airports (11 of them in Appalachia) with scheduled airline service. Some 2.2 million passengers enplaned from these Appalachian airports in 1966.

In addition, there are 38 publicly-owned general aviation airports and an estimated 63 privately owned airports and airstrips in Appalachia Pennsylvania which serve the needs of privately owned aircraft.

Under contract to the Appalachian Regional Commission, Management Economics Research Incorporated developed Guidelines for An Appalachian Airport System, a study which proposed $10.7 million in improvements to the air carrier airports and another $9 million to improve the 38 general aviation airports and to create an additional 10 airports in sections of Appalachia Pennsylvania not now served. These are costs to be spread over the 1967-71 period.

Water transportation has been important to Pennsylvania since the days of the Swedes who established a port near Chester. William Penn's first instructions related to finding suitable port facilities for his new colony, and he dreamed of a trans-Pennsylvania canal system. Today, the Delaware River ports that focus on Philadelphia serve a fairly restricted hinterland in southeastern

Pennsylvania and they are locked in competition with both the Port of New York (which is particularly attractive to general cargo shippers) and the Port of Baltimore (which is able to attract steel shipments from western Pennsylvania and eastern Ohio). Even so, the Delaware River ports have increased their cargo tonnage in the past decade while New York ports remained about constant and Maryland ports declined.

The Pennsylvania canal system, the State Works, was short lived but connected the corners of the State for a brief period before 1850. Today, the Allegheny, Monongahela and Ohio Rivers in western Pennsylvania are the only remaining links of an internal waterway system. They float some 50 million tons of commerce annually, most of which is centered around the needs of Pittsburgh steel mills.

The Port of Erie, the State's only Lake Erie port, is located in Appalachia Pennsylvania. Contrary to expectations, Port of Erie has not developed to the extent projected with the opening of the St. Lawrence Seaway in 1959. As with other neighboring ports on Lake Erie-Ashtabula, Conneaut, and Buffalo - Port of Erie actually declined in waterborne tonnage between 1956 and 1965. Individual circumstances such as closing of the Pennsylvania Railroad's coal dock and transfer of coal loading to the railroad's new facilities in Ashtabula, Ohio, and the closing of a plant that consumed most of the iron ore received at Erie, tend to explain the Port's decline.

As with other Lake ports, it suffers the disadvantage of interrupted service during Winter months when the Lake is frozen, giving coastal ports a certain advantage. The absence of a large industrial hinterland such as that surrounding Buffalo, Cleveland, Toledo, and other ports is also a handicap. Pittsburgh is 131 miles to the south and the object of fierce competition among Atlantic coast ports and the several railroads linked to them.

Recently, a trade between Port of Erie and Erie Marine, Inc. (Litton Industries) resulted in the construction of new terminal facilities in the East Bay area on a 70 acre site. Here there will be 1,000 feet of berthing space with an additional 500 feet to be developed in the future, and a 50,000 square foot warehouse is being built.

A major recommendation for economic stimulation and improvement of rapid transportation in the Commonwealth is embodied in the $1.5 billion Keystone Corridor proposal, a 298-mile east-west route generally paralleling the Pennsylvania Turnpike across the State. This proposed system would consist initially of two tracks with service provided for passengers and freight at speeds of 90 and 150 miles per hour.

As presently envisioned, this corridor would connect with a compatible rapid rail system in the Northeast Corridor under development between Washington and New York and Boston. West of Pittsburgh, it would be extended to Chicago and St. Louis. It would act as a catalyst just as its predecessor, the Pennsylvania Turnpike, did.

Among several compelling arguments cited in support of this proposal made by the consultant to the Commonwealth, the Westinghouse Air Brake Company, the main benefit of the Keystone Corridor would be its stimulation of the economy. Pointing to the fact that Pennsylvania has had difficulty in attracting industries producing machinery and related products (industries producing such items as production equipment, computers, appliances, electronics, and motor vehicles), the consultant emphasized the importance of fast delivery service to these industries. "Inventories in these industries are relatively costly to maintain due to their high value and high obsolescence rate. High-speed transportation can be advantageously used by these industries to reduce their inventories. Instead of maintaining scattered stockpiles near major demand centers, orders can be filled overnight from a central source by using the Keystone Corridor...

"An increasing demand for high-speed transportation can also be expected from other industries. Shippers of perishable and fashion items could utilize the Keystone Corridor to extend their market areas. Shippers of goods in less-than-carload or truckload lots already pay a large transportation premium, and the Keystone Corridor would provide them with much better service at a negligible percentage increase in their rates...The publishing industry and the drug industry have obvious need for high-speed transportation."

This proposed system would be considerably different from today's railroads in that containerization and a high level of mechanization are envisioned. Freight trains with 90 mph schedules instead of 20 mph would be the rule. Passenger service also would be offered; however, the consultant found that such service could not compete effectively with air travel on long trips or with the family car when groups of three or more travel together. The Keystone Corridor represents an advanced solution to the movement of goods beyond any system in practice today.

NORTHWEST LOCAL DEVELOPMENT DISTRICT

Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango, and Warren Counties have established the Northwestern Pennsylvania Regional Planning and Development Commission.

Northwestern Pennsylvania is characterized by a wide variety of economic pursuits - steel making and fabricating; oil and gas production; coal, limestone, and clay mining; forestry and wood products; dairies, orchards, and vineyards. This variety of employment sources in the eight county, 5,476 square mile District is the result of the terrain and natural resources of the area. The southern and eastern portions of the District are characteristic of the Allegheny Plateau with rugged, deeply dissected land, while to the north and west from Lawrence to Erie Counties the terrain is smoother, having been covered by glaciers in the Ice Ages. Along Lake Erie there is a narrow coastal plain.

In addition to the Lake border with Canada, the Northwest Local Development District shares boundaries with New York on the northeast and Ohio on the west. To the south lies the Southwest Local Development District with Pittsburgh at its center and to the east is the North Central Local Development District. And in at least a figurative sense these neighbors suggest reasons for the variety of enterprises found throughout the Northwest District.

Western New York and north central Pennsylvania have long been the home of thriving forest based industries, as has the eastern part of the Northwest District, and these same areas enjoyed oil and gas field strikes in the late 19th Century which brought early prosperity to many of the economic activity areas in the District. To the south, Clarion, Venango, and Mercer Counties have some bituminous coal, a resource they have in common with neighbors south and east. On the west, Youngstown, Ohio, is a dominating neighbor to Mercer and Lawrence Counties which share with it and Pittsburgh to the south a long history of steel manufacture. Crawford and Erie Counties to the north share with their neighbors in Ohio highly productive agriculture and together account for two-thirds of the District's total farm receipts.

ECONOMIC ACTIVITY AREAS

Economic activity centers have been identified as the focus of economic, social, governmental, and transportation activity. A center and its hinterland, which includes both urbanizing sections and closely related agricultural areas, form an economic activity area. These areas include approximately 80 percent of the District's population although they are estimated to contain less than a third of the land area. Each area, of course, has unique characteristics.

ERIE is the largest economic activity area in the Northwest District with an estimated population of 223,000. Approximately 175,000 persons live in the City of Erie and the urban area around it, and the remaining 48,000 people live in the hinterland that is closely tied to the economy and institutions of the City. Located at one of the best natural harbors on Lake Erie, it is served by ocean-going vessels, five railroads, and will be connected to other sections of Pennsylvania as well as New York and Ohio by two Interstate highways.

The major employers in order of total jobs are wholesale and retail trade, services, civilian government, electrical machinery, fabricated metals, transportation equipment, primary metals, and non-electrical machinery. Of these, all except transportation equipment and primary metals are growing in employment. The outlook for future growth in these two exceptions seems to be poor; it is only fair in non-electrical machinery. Expectations for increases are considered good in trade, government, electrical machinery, and fabricated metals. For services, the growth prospects are rated excellent.

Among manufacturing industries, the Erie economic activity area typifies much of the Northwest District by having a low proportion of employees in industries with low wage levels. In 1965, only 9.4 percent of manufacturing jobs were in low wage industries in contrast to the rest of Appalachia Pennsylvania with over 23 percent in such industries. The proportion in high wage manufacturing industries also was lower than for the rest of Appalachia; almost two-thirds of all manufacturing jobs were in medium wage industries. In the Erie economic activity area, 42 percent of the 1965 employment was in manufacturing, and this proportion is expected to increase slightly as overall employment increases from 98,900 (1965) to 111,300 (1975).

In the City of Erie most of the manufacturing employment is concentrated - 23,505 jobs in 285 plants as of 1966. When the surrounding urban areas are added, the total of manufacturing employment is 36,000 in 340 plants. The fifteen largest range in size from 8,700 (electrical machinery) to 487 (aluminum and chemicals) and account for about 21,000 employees.

Among significant recent developments in the Erie economic activity area was the announcement of a new ore barge construction facility on the Erie waterfront. In addition, an aluminum plant announced expansion of its facilities in Erie.

With over a third of the District's population, the Erie economic activity area is expected to continue as the largest center of economic and social affairs, and it is expected to contain about half of the District's employment growth between 1965 and 1975.

In terms of population, three economic activity areas - Sharon-Farrell-Greenville, Franklin-Oil City-Titusville, and New Castle - are about the same size - 70,000 people. They are different in land area, however.

FRANKLIN-OIL CITY-TITUSVILLE is the largest of these three areas; it covers most of Venango County and small parts of southeastern Crawford County and western Forest County. As the name implies, the economic activity area includes three centers - Franklin, Oil City, and Titusville - whose economies are closely linked as urbanization around Oil City reaches out toward the others. Around each and overlapping is the more rural hinterland which these centers serve. Two-thirds of the area's population is urban and one-third rural, according to local estimates. The center city population of each of these communities is declining slightly while the surrounding townships are growing modestly. Of the three, Oil City with a 1960 population of 17,700 is about twice the size of the other two.

Total employment in 1965 was estimated to be 27,600 and is projected to increase to 29,500 by 1975, yet this projected job creation will be too small to curb the continued out-migration of young people which has plagued the area for several years. In late 1967, the unemployment rate was 4.9 percent (aggravated by the effects of a nationwide strike in the glass container industry), while the Pennsylvania rate was 3.0 percent. With the settlement of that strike, the unemployment rate is expected to move back toward the 2.4 percent low the area achieved in 1965.

Major sources of employment (in order of importance) are civilian government, wholesale and retail trade, non-electrical machinery, services, primary metals, and transportation, communications, and public utilities. Only non-electrical machinery and primary metals are showing job losses. For the others, the growth potential appears to be good to excellent. Despite the poor showing of past trends in non-electrical machinery manufacture, prospects for growth are considered locally to be good.

Among manufacturing industries (which account for one-third of the area's employment), only 3.2 percent of the jobs were in low wage industries in 1965; slightly more than one-third were in high wage paying industries, while the remaining 60 percent were in the medium wage paying category. Employment projections for manufacturing industries in the area suggest that the proportion in low wage paying industries will remain constant with a slight increase in the proportion of jobs occurring in the medium wage paying industries. Between 1960 and 1965, manufacturing employment in the area dropped by 600.

As local officials note, female participation in the labor force has been particularly low in the area although it has increased since 1950. Often, as in the Franklin-Oil City-Titusville economic activity area, low female participation in the labor force occurs along with a small proportion of low wage paying industries, the inference being that female employing industries generally have low wage rates.

While there are factories with over a thousand employees in the area, 90 percent of manufacturing establishments have less than 20 employees. This suggests a wide range of diversification in the area. And recently announced expansions suggest that existing manufacturers are pleased with the business climate. Two steel producers are expanding facilities, a tool producer is engaged in a substantial expansion, a glass plant is engaged in modernization, and at least three other local manufacturers are at various stages of new building programs - one of them being the replacement of a recently closed factory employing 300. A $50 million expansion of a steel plant in Titusville is bringing in 500 new jobs, and a manufacturer of camping trailers requiring 125 workers has located in the area.

SHARON-FARRELL-GREENVILLE is an economic activity area with an estimated population of 69,600 which lies on the western boundary of Pennsylvania and is part of the "little Ruhr" steelmaking complex that is dominated by

Youngstown, Ohio. Over two-thirds of the area's population lives in the urbanized sections in and immediately surrounding the three economic activity centers In this distribution the Sharon-Farrell-Greenville economic activity area resembles the Franklin-Oil City-Titusville area, and there is a further resemblance in that the two largest economic activity centers are close together with the third lying about 15 miles to the north.

The Sharon-Farrell-Greenville economic activity area covers much of western Mercer County, while considerably smaller economic activity areas - Mercer and Grove City - are located in the east and southeast of the County. Employment statistics include all of these economic activity areas.

In Mercer County, primary metals has historically been, and continues to be, the major source of jobs - currently providing an estimated 10,000. Next in order of importance to the County are retail and wholesale trade, electrical machinery, services, government, and transportation, communications, and public utilities. Only the last category appears to be stable; the rest are increasing with local opinion predicting a good growth potential.

The highly industrial quality of the estimated 44,500 employment is reflected in the fact that 46 percent of all jobs are in manufacturing. According to State Planning Board projections, this proportion may increase by one percent by 1975.

In Sharon, the major industries are the manufacture of electrical transformers and generators and the production of railroad transportation equipment. Farrell's leading industries and those expected to have the greatest growth potential are machinery, steel production, wholesaling, and retail trade, while in Greenville the most significant sources of employment are in railroad equipment production and fabricated steel platework.

The products of these leading industries suggests kinds of manufacturing which do not typically employ women. (Nor are they low wage paying - the economic activity area has less than 4 percent in low paying industries.) Indeed, local officials report that less than 10 percent of the manufacturing labor force is female. Thus, here as elsewhere in the Northwest District there is little female employment and few low wage paying manufacturers.

Because the Sharon-Farrell-Greenville economic activity area is dominated by the larger industrial area centered on Youngstown, events in Ohio are of great consequence to Pennsylvania residents. And, of course, the converse is just as true. Recent developments such as the announced $25 million modernization of an electrical machinery plant in Pennsylvania is considered significant in both Pennsylvania and Ohio. Likewise, a new $9 million plant in Ohio is expected to draw 70 percent of its employment from the Sharon-Farrell-Greenville area.

A steel mill in Sharon has spent $91 million in modernization over the past four years and accounts for some 6,000 jobs. A new plastics plant in Pennsylvania and a new electrical equipment plant in Ohio, each with initial employment of 150 new jobs, have been announced. Whether development occurs in Ohio or Pennsylvania, there is a general conviction and considerable evidence that both areas benefit and tend to complement one another.

NEW CASTLE is an economic activity area twenty miles southeast of Farrell on the Shenango River and is the third economic activity area in the Northwest District with a population of about 70,000. The City of New Castle is second to Erie in size among the District's communities with a population of 43,000 in 1960, a population which is declining although that of the surrounding urban area is increasing. Slightly less than two-thirds of the economic activity area's population is in the urban area of the City and its environs.

Major sources of employment in order of importance are retail and wholesale trade, services, non-electrical machinery, civilian government, primary metals, and stone, clay, and glass; of these, only primary metals is showing a slight decrease in employment. The growth potential in this industry and in non-electrical machinery is considered locally to be poor; in stone, clay, and glass, the potential is considered good (a structural glass plant in New Castle has recently expanded its facilities); among the remaining leading industry groups, the growth potential is thought to be excellent.

Published employment data cover all of Lawrence County, which includes both the New Castle and the Ellwood City economic activity areas. Manufacturing employment for the County dropped 600 between 1960 and 1965, a characteristic which the area shared with the Franklin-Oil City-Titusville economic activity area while the District's other activity areas were increasing their manufacturing jobs. But in contrast to all other economic activity areas in the District, the Lawrence County non-manufacturing employment also dropped between 1960 and 1965. This was an 800 job decline.

Another sharp contrast with the economic activity areas already described is New Castle's higher proportion of low wage paying manufacturing industries - 33.9 percent. Even with this lower wage structure, it was estimated by local officials that 86 percent of manufacturing jobs were held by men.

Development officials in the New Castle area have encouraged several small expansions of existing plants including a research and development firm, a structural glass plant, and a bridge building company. Total new employment from these expansions will be about 150.

MEADVILLE is an economic activity area in central Crawford County and contains an estimated 38,000 people; 21,500 live in Meadville Borough and the surrounding urban area. The County is the most important livestock producing area in the Northwest District, and Meadville has long served as the County's primary trade center. Meadville also is the home of Allegheny College (which has some 1,500 students) and is the County seat.

Between 1950 and 1960, the area's population remained almost constant although a very substantial loss (estimated as about 9,500 people) did occur through out-migration to offset the natural increase. However, the estimated out-migration between 1960 and 1965 was only about 225 people.

Two manufacturing industries dominate the employment of the Meadville economic activity area. They are a viscose plant and a zipper factory; together they have approximately 3,100 employees. Total employment in western Crawford County is estimated to be 20,900 and the rate of unemployment (4.5 percent in 1967) has been declining over the past few years.

The most important industry groups in order of their employment are retail and wholesale trade, services, government, chemicals, transportation, communications, and public utilities, and agriculture, with only agriculture declining in employment. The others are increasing and local opinion views growth prospects for them as good to excellent.

WARREN Borough is the economic activity center of Warren County which is in the northeast corner of the Northwest Local Development District. The Borough and surrounding urban townships had an estimated 24,000 population by 1968 with an additional 11,000 people living in the immediate hinterland and served by the Warren economic activity center. An early timber and oil town on the upper reaches of the Allegheny River, Warren today has an industrial composition closely resembling other economic activity areas in the Northwest District. Some 2,000 jobs (out of 16,800) are in primary metals manufacturing and another 700 are in metal fabrication.

Situated in the deep valley cut by the Allegheny River, Warren enjoys a scenic location adjacent to two important recreation attractions - the Allegheny National Forest and the Allegheny River Reservoir formed by the recently completed Kinzua Dam. Thus, tourism is expected to grow in importance to the economy of the Warren economic activity area.

In order of importance, wholesale and retail trade, government, primary metals, fabricated metals, services, and tourism are the major sources of jobs. The outlook for growth in primary metals is poor, in fabricated metals, good, and in the remaining industry groups, excellent.

Important to the local economy is the very high proportion of manufacturing jobs found in high wage paying industries. By 1965, 53 percent were in this category. At the same time, 9.4 percent were in the low wage paying industries, a proportion higher than most other economic activity areas of the District. However, the Warren area has a somewhat lower proportion (37 percent) of manufacturing jobs than most other areas in the District.

Two local manufacturers have recently embarked on expansion programs that will add 200 employees, and an expansion of the geriatrics ward at the Warren State Hospital will reportedly require 300 new employees. By the Spring of 1968, unemployment in the Warren labor market area was down to 0.9 percent and a housing shortage stands in the way of migration into the economic activity area.

CLARION is an economic activity area which covers central Clarion County in the southeast quadrant of the Northwest District. Clarion Borough is the home of Clarion State College which has shown marked growth (from 600 to 2,800 students between 1957 and 1966) and is the seat of County government. Historically, it also has been the focus of the lumbering, oil and natural gas exploration, railroading, and coal mining that have been important to the economy. Mining of clay and glass sands are also important, and today they furnish raw materials to the area's largest employer - a glass plant. Clarion

County is second in Pennsylvania in the amount of bituminous coal strip-mined and has an estimated 21,000 acres of land in need of restoration.

Clarion Borough has a population of about 5,000 and a surrounding urban area of 2,900 people. The hinterland which focuses on the Borough is different from hinterlands of other centers in the District in that its population (18,100) is more than twice that of the Clarion economic activity center. In most of the economic activity areas, the economic activity center has aboout twice the population of the hinterland.

Major sources of employment in the Clarion economic activity area include government (Clarion State College), retail and wholesale trade, glass manufacture, services, and agriculture. For agriculture, the outlook is not thought to be good (dairying, meat animals, and poultry are the primary sources of farm income); glass is thought to have a good growth potential, while trade and government employment have excellent prospects. Clarion has a low proportion (4 percent) of its manufacturing employment in high wage paying industries; most (80 percent) is in the medium wage category.

CORRY, in the extreme southeastern corner of Erie County, has a similar population distribution to that of Clarion: the Corry economic activity center with a population of 7,800 is surrounded by a hinterland of 10,900. Nearly all employment, economic, commercial, and social activities for this economic activity area which encompasses parts of Erie, Crawford, and Warren Counties are concentrated in the City of Corry itself.

The economy of the area is highly diversified with no plant or industry group being the dominant employer. The single largest employer in the 6,230 employment force is an office furniture manufacturer with 750 workers. During the past few years, several small plastics, rubber, and metal fabricators have been added to the manufacturing enterprises in the area.

Today, the leading industry groups in terms of employment are furniture and fixtures, wholesale and retail trade, fabricated metal, non-electrical machinery, and stone, clay, and glass. In the last category, the growth potential is rated excellent, and for all other categories the expectation is good except in fabricated metals where employment is stable but growth prospects are thought to be poor.

Corry's diversification is credited with saving it from economic crises such as those suffered in other economic activity areas of the District when a key employer cut back operations. When the rest of Erie County was experiencing unemployment in excess of 6 percent and was thereby entitled to certain Federal grants, Corry had a lower rate. Local officials report that their employment development program has been so successful that the labor pool is completely depleted, that local employers indicate a need for 400 additional employees, and that there is insufficient housing to attract needed new workers to the area.

ELLWOOD CITY is an economic activity area in southeast Lawrence County and lies between New Castle and Beaver Falls, both of which vie with Ellwood City merchants for trade with the area's 16,000 population. Ellwood City itself has an estimated 11,300 population and is surrounded by an urban area of about 1,000 people while its hinterland has almost 4,000 people.

The employed labor force is about 6,600 with a recently reported unemployment rate of 2.3 percent, which is considerably lower than rates experienced in the late fifties and early sixties when steel employment was down. In terms of total employment, the major industry groups are primary metals (steel pipes and tubes), non-electrical machinery, fabricated metals, services, and wholesale and retail trade; all of them are reported to be increasing their employment. In the first three categories, growth potential is rated locally as good, and in the last two, excellent.

Two industries - a steel pipe and tube plant and a conveyor manufacturer - easily dominate Ellwood City with 3,200 employees. There is a small proportion of low wage paying industries (5.2 percent), while 71.0 percent of the area's employment falls into the medium range.

GROVE CITY is an economic activity area with a population of 12,000 located in eastern Mercer County. About 8,300 of these people live in the central urban area.

Grove City College with a current enrollment of 1,885 is an important employer, and 16 manufacturing industries add 2,485 jobs to the area. The largest employer, a plant manufacturing air and gas compressors (formerly specializing in diesel locomotives) has 1,850 workers.

Less than 200 manufacturing workers are women, and a new metal fabricator which is expected to reach an employment of 120 by mid-1968 will also have a predominantly male work force.

Indeed, the area's specialization in machinery and metal fabrication - industries with relatively high wage scales - is reflected not only in the low proportion of women employed but by the high average wages received in Grove City - $7,200 per manufacturing worker.

The growth potential for machinery and Grove City College is considered to be good, and for retail and wholesale trade it is considered excellent.

MERCER is an economic activity area in central Mercer County. Mercer Borough with a population of 2,800 is the County seat and the center of an urban area estimated at 3,700. The surrounding hinterland is about equal in population.

In addition to being the focus of governmental employment, Mercer has three manufacturing establishments with 300 employees, over 200 of them being employed in a heating equipment plant. The outlook for employment growth in this industry is considered good, as it is in retail and wholesale trade, the other large source of employment in the area.

MARIENVILLE (Jenks Township) is a village in Forest County, and with a population of 1,200 is the center of the only designated economic activity area in the County. It contains three manufacturing plants with total employment of 300. The largest of these produces glass containers and has 200 workers. Tourism in this predominantly rural county, part of which is included in the Allegheny National Forest, is a large component of the local service industry. Also, local retail trade is affected considerably by the tourists.

DISTRICT CONDITIONS

THE PEOPLE

Of the 720,000 people living in the Northwest Local Development District, 60 percent are estimated to live in urban places - places with a population of 2,500 or more. Almost three-quarters of the District's people live in Erie, Mercer, and Lawrence Counties. Analyzed in a somewhat different fashion, about 80 percent of the District's population resides in the economic activity areas just described, and 25 percent lives in the Erie economic activity area alone.

Much of the increase in population is expected to occur in the major economic activity areas since these are the places where job opportunities are most likely to expand. Yet, past trends are far from reassuring when considering population growth. Between 1950 and 1960, the Northwest District lost 41,134 people through out-migration and an additional 31,289 are estimated to have left during the 1960-65 period. Thus, the rate of leaving picked up in the early sixties as unemployment rates remained high in many of the District's economic activity areas; among counties however, there was considerable variation.

TABLE 17

OUT-MIGRATION FROM COUNTIES IN THE NORTHWEST DISTRICT*

County	1950-1960	1960-1965	1965-1975
Clarion	- 5,783	- 1,212	- 1,700
Crawford	- 9,503	- 227	+ 3,900
Erie	- 5,771	-11,027	+ 5,300
Forest	- 807	+ 362	- 800
Lawrence	- 7,526	- 9,155	- 4,600
Mercer	- 1,808	- 6,980	- 4,000
Venango	- 8,004	- 4,491	- 4,200
Warren	- 1,932	+ 1,441	+ 2,800
District Total	-41,134	-31,289	- 8,600

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board Estimates.

Erie County lost almost twice as many people in the 1960-1965 period as it did in the previous decade, and Mercer County's losses jumped even more. In the same five-year period, Mercer lost almost four times the number it lost in the fifties. Neighboring Lawrence County experienced an increased rate of departure by families as it lost about 1,600 more people in the first five years of the decade than it did throughout the fifties.

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*The method used to derive the migration figures depended upon first obtaining an estimate of the natural increase that might be expected in each county by 1975. This figure was derived from information published by the U. S. Bureau of the Census. Employment data were obtained from the Bureau of Employment Security of the Pennsylvania Department of Labor and Industry and from the Pennsylvania Department of Internal Affairs. Labor force participation rates were derived from employment and population data for 1960 and 1965 and then projected (based on national trends) to 1975. Employment projections developed by the Bureau of Employment Security were distributed among the counties and labor markets of the State on the basis of changing shares during the recent past. Then the labor force participation rate for 1975 was applied to the 1975 employment forecast (including a 3.5 percent unemployment rate assumption for all areas) to arrive at the population that this employment could support. The difference between this population total and the natural increase total is the migration figure.

Some of these rates of migration probably have been arrested by 1968 as rates of unemployment have continued to drop. Among these changes, the reversal estimated for Erie County is the most dramatic since it not only presumes that the trend of 1960-1965 will stop, but that during the 1965-1975 decade all of the natural increase of the population will be absorbed and that an additional 5,300 people will immigrate to the County because of expanding employment opportunities. In Lawrence and Mercer Counties, the changes forecast are less dramatic, but they are nevertheless a substantial slowdown in the rate of leaving. The most questionable of the 1965-1975 migration assumptions is that shown for Forest County since its earlier in-migration is now lost by out-migration. (Actually a limitation in available employment data made the computation for Forest County difficult. Its 1975 employment may actually be higher which would mean there would be enough jobs to support a larger population.)

A scarcity of workers is reported in some sections of the District, a condition explained both by the increase in jobs and the previous out-migration of other workers.

One basis for population projections is to examine work opportunities likely to occur at some future date and then to estimate the number of families that can be supported by those jobs. On that basis, the District's estimated 1965 population of 726,100 may expand to 770,500 in 1975. But even with this estimated 44,400 population increase over 1965, there will be an estimated 8,600 out-migration from the District.

TABLE 18

NORTHWEST DISTRICT POPULATION FOR 1960, 1965, AND 1975

County	1960	1965	1975
Clarion	37,408	38,300	39,400
Crawford	77,956	80,900	89,100
Erie	250,628	255,000	281,000
Forest	4,485	5,000	4,400
Lawrence	112,965	108,300	109,700
Mercer	127,519	126,500	130,500
Venango	65,295	63,100	62,000
Warren	45,582	49,000	54,400
District Total	721,838	726,100	770,500

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board Estimates and Projections.

None of these figures is intended as anything more than the best estimate of the future based upon current knowledge and couched in a respect for past trends. Indeed, many assumptions were necessary before any computations could be made. Yet, the overriding value of making these estimates is to inform local development officials what the future is likely to be as seen today. If they find the predictions unacceptable, they may embark upon programs to change the outcome.

EMPLOYMENT

Job development might be termed the key question in Appalachian development planning. Certainly it is at the heart of the Appalachian Regional Development Act and has been the central issue in the development strategy of earlier reports by Pennsylvania to the Appalachian Regional Commission. The reason is clearly illustrated by the Northwest District's recent history. In 1958, the rate of unemployment for the District's 277,400 labor force was 12.6 percent. By 1962, it was down to 8.4 percent, still a serious level, and in 1967, the rate was 4.0 percent. The high rates of unemployment in the early sixties probably explain the high levels of out-migration discussed above.

Throughout the Nation there has been a prolonged economic upturn stimulated in part by spending for the Vietnam conflict, and this general upsurge has contributed to the improved employment situation in the Northwest Local Development District. There are indications that the District's economy has recovered from the deep recession it experienced in the late fifties and that a substantial portion of its recovery is due to economic adjustments rather than wartime spending. For example, there has been a considerable amount of spending for new plants and equipment so that industries are able to compete efficiently with other areas. And there has been some diversification which has had the effect of diluting the District's specialization in primary metals, metal fabrication, and machinery manufacture - all of which suffer deep employment cutbacks when the economy gets sluggish.

Therefore, the employment projections shown below imply that much of the economic recovery of the Northwest District between 1960 and 1965 will continue despite cutbacks expected with the end of the Vietnam conflict. And they show that the District's economy will continue to be tied to manufacturing employment.

About 43 percent of the projected 29,600 new agricultural and wage and salary employment* between 1965 and 1975 is predicted for manufacturing

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*Shown as a sub-total in Table 19. Methods for estimating self-employed and unpaid family and domestic workers are being changed so that comparisons from 1960 to 1975 are impossible. Thus, this category is excluded in this discussion of employment changes although it is included in the total shown in Table 19.

TABLE 19

NORTHWEST LOCAL DEVELOPMENT DISTRICT EMPLOYMENT (IN THOUSANDS)

Industry Group	1960	1965	1975
Agriculture	11.8	10.1	7.5
Mining	2.0	1.8	1.4
Contract Construction	5.8	7.1	8.7
Transportation, Communications, Public Utilities	15.7	15.1	16.3
Trade	33.5	37.5	43.3
Finance, Insurance, Real Estate	5.6	5.8	6.7
Services	25.7	27.4	30.9
Civilian Government	22.9	26.7	33.5
Manufacturing	94.4	102.6	115.4
Food	4.4	4.0	3.6
Tobacco	-	-	-
Textiles	0.1	0.1	0.1
Apparel	0.4	0.4	0.5
Lumber, Furniture	3.4	3.4	3.9
Paper	2.4	2.3	2.5
Printing	2.1	2.2	2.5
Chemicals	2.0	2.6	3.4
Petroleum	1.7	1.3	1.2
Rubber	3.7	4.5	5.5
Leather	0.8	0.4	0.3
Stone, Clay, Glass	5.5	5.3	5.8
Primary Metals	19.8	21.8	22.5
Fabricated Metals	9.7	10.7	12.4
Non-electrical Machinery	14.4	14.7	16.1
Electrical Machinery	12.0	12.5	15.8
Transportation Equipment	5.7	8.5	9.8
Instruments	1.8	2.9	3.6
Miscellaneous Manufacturing	4.5	5.0	5.9
Sub-Total Agricultural and Wage and Salary	217.4	234.1	263.7
Self-employed	29.5	28.2	24.0
Total	246.9	262.3	287.7
Unemployed	24.4	10.4	8.6*

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* 3.5 percent unemployment rate assumed as point at which people begin out-migration.

Source: Pennsylvania Bureau of Employment Security, Department of Labor and Industry; Pennsylvania Department of Internal Affairs; Pennsylvania State Planning Board.

industries, a proportion somewhat high considering that nationally the proportion of manufacturing employment is declining and has already dropped below 30 percent of the Nation's jobs. Even so, the method employed in making the projections revealed that the District's economy has shown its greatest strength (when compared with other areas in Pennsylvania) in manufacturing and that this vigor would result in continued increases in manufacturing employment.

The table shows which industries are expected to grow and by how much. These totals were derived from projections for each of the seven labor market areas into which the District is divided for labor force reports. For example, the Erie labor market area was examined independently, industry by industry, and projections were developed based on the area's changing shares of total Pennsylvania employment. After it and each of the other areas was similarly analyzed and projected, the results were totaled to give the employment figures shown for the District.

These totals indicate that the District's four major employers - primary metals, fabricated metals, non-electrical machinery, and electrical machinery - will continue to provide about 58 percent of all manufacturing employment. An implication of this fact is that the District's large proportion (33 percent) of employment in high wage paying manufacturing industries in 1965 will probably continue, though in a slightly smaller proportion in 1975 (31 percent).

TABLE 20

PROPORTION OF MANUFACTURING WORKERS BY WAGE CATEGORIES

Wage Category	1960	1965	1975
High	31.0	32.9	31.2
Medium	59.3	58.0	59.5
Low	9.7	9.1	9.3

Source: Pennsylvania Department of Internal Affairs; Pennsylvania State Planning Board.

At the other end of the wage scale, a fact that was repeatedly apparent in descriptions of the District's economic activity areas, namely that there is a lack of unskilled, low wage paying manufacturing employment, will continue in the future if these projections are realized. Women in particular are not likely to find work in the industries of the District where growth is expected, and since a growing percentage of American women do work, District development officials may wish to attract some industries which have a high proportion of female workers.

Attracting female employing industries usually implies that they will have low wage rates, a fact that often is decried by labor leaders. Of considerable importance, however, is that wives often seek jobs to supplement the family income and therefore consider themselves secondary breadwinners, but their earnings become an immediate boost to per capita income. In 1965, only a sixth of all manufacturing jobs in the District were held by women while for the State the proportion was 28 percent. Had the District achieved the State level, it would have had another 16,343 jobs, and even if these had only paid an average of $75 per week, personal income in the District would have increased by more than $37 million and per capita income would have increased by $51.91 per year. The advances would be particularly marked in those counties where female employment is low - Mercer (7.9 percent), Lawrence (14.5 percent), Venango (18.9 percent), and Erie (19.6 percent).

The employment projections for 1975 for the Northwest District assume little expansion of female employing industries only because past experience has not shown increases. Yet, there could be large increases in this industrial sector simply because a large labor force is available.

An important point about the 1975 projections which cannot be seen in the table but is nevertheless implicit in the method employed, is that job growth is expected to occur where industries were located in 1965. (No account could be taken of the possibility that an entirely new industry might be introduced in an area.) Thus, about half of all new jobs are forecast for Erie County; another quarter for the Sharon-Farrell-Greenville and the Meadville economic areas, and the remainder to the other economic activity areas in the District.

This predicted uneven distribution is the result of two factors: mixture of industries and recent performance of them. That is, an economic activity area may contain industries in which little growth is expected because of national trends in the same industries, or the area's industries may have demonstrated little if any growth relative to other areas during the recent past. Either factor can explain the slow growth expectation for 1975. This is not to say, however, that a particular economic activity area will not grow despite these handicaps. It may indeed achieve growth in an industry for which little growth is predicted, or it may escape from its past inability to grow and perform remarkably well. Such reversals are unpredictable.

A brief review of the District's performance between 1960 and 1965 illustrates employment trends recently in evidence. Absolute changes in employment are important to job holders, but without comparing them to changes taking place in a larger economic area such as the State, it is not possible to determine whether the District is performing poorly or well.*

Compared to the rest of Pennsylvania, the Northwest District could boast an employment growth rate (7.7 percent) that exceeded the Statewide average (7.2 percent) during the 1960-1965 period. Had the District grown at the State rate, total wage and salary employment would have increased by only

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* See the detailed shift analysis table in the Appendix.

TABLE 21

NORTHWEST DISTRICT INDUSTRIES EMPLOYING 10,000 OR MORE IN 1965

Industry Group	1965 Employment	State Growth Characteristic 1960-1965	District Growth Relative to the State
Trade	37,500	rapid growth	below average
Services	27,400	rapid growth	below average
Government	26,700	rapid growth	below average
Primary Metals	21,800	slow growth	above average
Transportation, Communications, Public Utilities	15,100	declining	above average
Non-electrical Machinery	14,700	rapid growth	below average
Electrical Machinery	12,500	slow growth	above average
Fabricated Metals	10,700	declining	above average

Source: Pennsylvania State Planning Board.

15,650. Instead, the total gain was 16,700, or a net relative shift upward of 1,050 jobs from growth expectations based on the Pennsylvania norm. In the Northwest District the largest contributors to the total upward shift were:

Industry	Net Relative Employment Change
Transportation Equipment	+ 2,390
Government	+ 2,150
Trade	+ 1,590
Instruments	+ 970
Construction	+ 880

While relative increases in District employment more than offset relative losses, downward shifts occurred within several industry categories. Most notable among them were:

Industry	Net Relative Employment Change
Agriculture	- 2,550
Transportation, Communications, Public Utilities	- 1,730
Non-electrical Machinery	- 740
Food Products	- 720

Most of the District's strength in employment growth derives from a favorable industrial mix. This means that employment within the District tends to be concentrated in industries that have exhibited Statewide rapid growth rate characteristics. Rapid growth industries at the State level include those that have grown faster than the average growth rate for all Pennsylvania industries combined. Conversely, expansion rates for industries characterized as "slow growth" or "declining" fall below the Statewide all-industry average. Relative gains in District employment deriving from the industrial mix effect were significant for the following industries:

Industry	Employment Change Related to the Industrial Mix
Government	+ 2,240
Trade	+ 2,200
Services	+ 1,710
Miscellaneous Manufacturing	+ 1,220
Non-electrical Machinery	+ 1,140

Although relative gains in employment attributable to the mix effect exceeded relative losses, at least three industries had a large negative effect on employment changes related to the mix component within the District because of their below average performance Statewide:

Industry	Employment Change Related to the Industrial Mix
Agriculture	- 2,170
Transportation, Communications, Public Utilities	- 1,950
Fabricated Metals	- 1,100

Here it is important to emphasize the difference between absolute and relative changes in employment. A minus sign does not indicate loss of employment in that particular industry, but it does indicate a relatively poor performance based on the standard against which it is compared. An industry such as fabricated metals may have actually gained in employment between 1960 and 1965 and yet have a minus sign for either the industrial mix or competitive change. This means that although the industry may have gained in employment between 1960 and 1965, its percentage gain was less than either the all-industry percentage gain or the percentage gain Statewide for the particular industry.

Recent trends indicate that the Northwest District has been able to compete effectively with other sub-State regions for new employment growth. Yet the District has not demonstrated a strong competitive advantage over other areas since upward and downward shifts in local employment related to the competitive factor tend to balance. This can be interpreted as meaning that any comparative advantages the District may have with respect to certain types of industrial activity are entirely offset by comparative disadvantages associated with other types of industrial activity. When this happens, any employment growth stemming from the fact that the expansion rate for a particular industry locally is greater than the expansion rate for that industry Statewide will be nullified by poor performance in other industry categories relative to Pennsylvania norms within the same industries. The industries which grew faster (or declined slower) in the District than in the remainder of the State include

Industry	Employment Change Related to the Competitive Effect
Transportation Equipment	+ 1,910
Primary Metals	+ 1,440
Fabricated Metals	+ 1,400

The District did not compete effectively with the rest of the State in the following industries:

Industry	Employment Change Related to the Competitive Effect
Non-electrical Machinery	- 1,880
Services	- 1,860
Miscellaneous Manufacturing	- 1,040

An appreciation for these components of change reveals the forces at work in a local economy. The comparison just described was with the remainder of the State on the assumption that the Northwest Local Development District competes with other areas of the State for new employment. A good case can be made, however, for comparison with a larger geographic area - the Middle

Atlantic States,* for example - because any district actually competes over a large section of the country. Accordingly, the District's projected employment in 1975 was compared with projections for the Nation and for the Middle Atlantic States prepared by the National Planning Association. Thus, possible future shifts have been analyzed so that District leaders can evaluate the effects of the employment projections and act to change trends they find unfavorable.

TABLE 22

NORTHWEST DISTRICT INDUSTRIES EMPLOYING 10,000 OR MORE IN 1975

Industry Group	1975 Employment	National Growth Characteristic	District Performance Expectation 1965-75 relative to: Mid-Atlantic	United States
Trade	43,300	slow growth	above average	above average
Government	33,500	rapid growth	below average	below average
Services	30,900	rapid growth	below average	below average
Primary Metals	22,500	slow growth	above average	above average
Transportation, Communications, Public Utilities	16,300	slow growth	above average	above average
Non-electrical Machinery	16,100	rapid growth	above average	below average
Electrical Machinery	15,800	rapid growth	below average	below average
Fabricated Metals	12,400	rapid growth	above average	below average

Source: Pennsylvania State Planning Board.

The Northwest District is expected to lose some of its share of national employment by 1975. This is a relative loss - if the District grew at the rate projected for the Nation, it would gain some 47,750 jobs instead of the 29,600 forecast. The explanation, contrary to widespread belief, is not found in the District's industrial mix. Rather, all of the net relative loss of employment derives from poor competitive effect.

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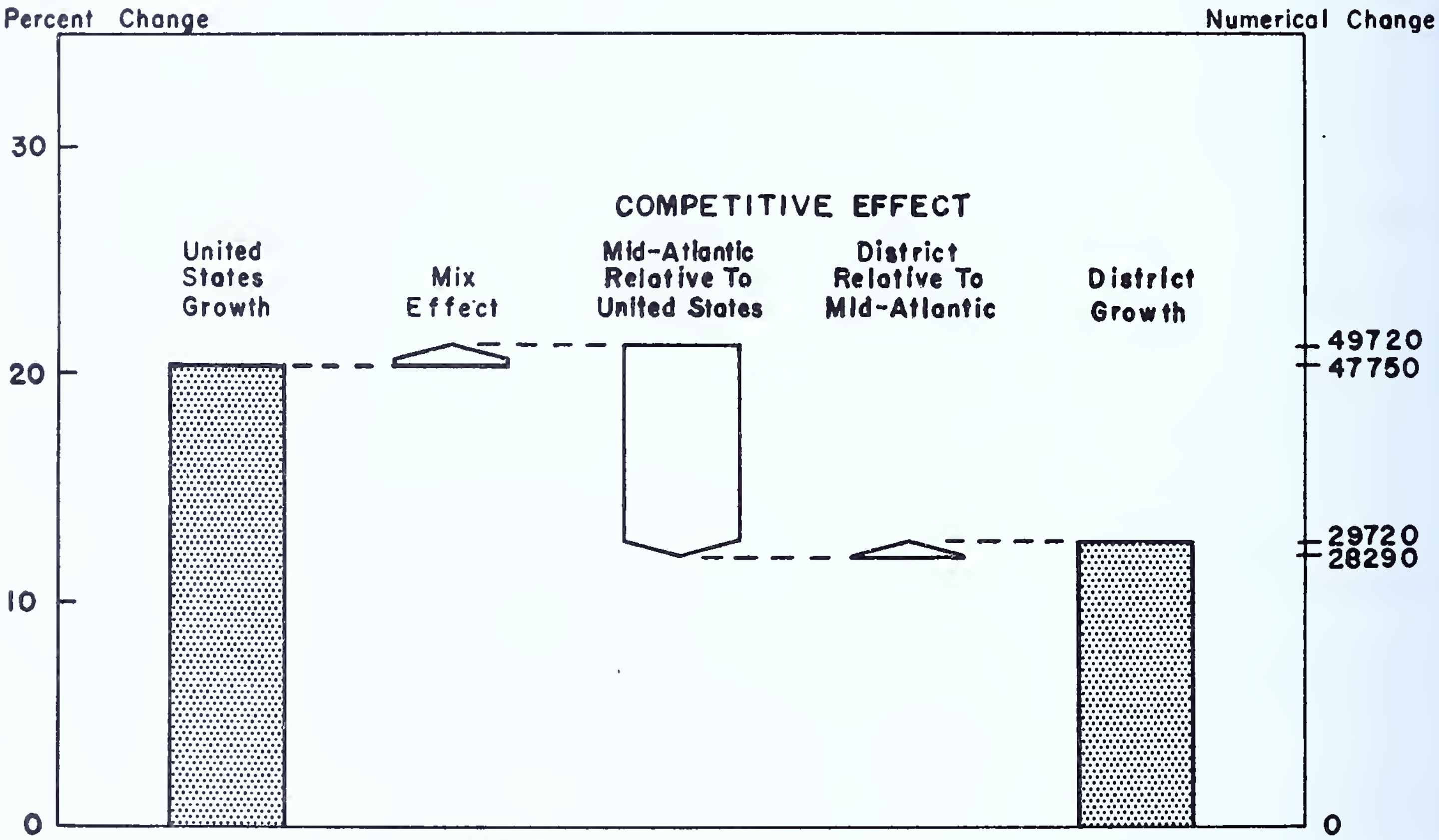
* The Middle Atlantic States region includes Pennsylvania, New York, New Jersey, Maryland, Delaware, and the District of Columbia.

CHART II

COMPONENTS OF EMPLOYMENT CHANGE
NORTHWEST DISTRICT
1965 TO 1975



Source: Pennsylvania State Planning Board

When taken a step further - by isolating the proportions of this lack of competitive advantage attributable to the Middle Atlantic States region and to the District - it is clear that the Northwest District actually is competing effectively within its region, if not with the remainder of the Nation. The District is expected to have a significant competitive advantage over the Middle Atlantic States in the following industries:

Industry	Employment Change Attributed to Competitive Effect
Retail and Wholesale Trade	+ 4,220
Primary Metals	+ 1,480
Agriculture	+ 1,240
Transportation, Communications, Public Utilities	+ 850

By contrast, the District is expected to experience significant competitive losses in relation to the Middle Atlantic States in the following industries:

Industry	Employment Change Attributed to Unfavorable Competitive Effect
Civilian Government	- 4,530
Services	- 3,610
Electrical Machinery	- 390
Rubber & Plastics	- 300

The Middle Atlantic States are expected to lose shares of national employment at a faster rate than the District. If this negative competitive effect were the same for the District, the net relative loss would be 21,430 jobs during the 1965-1975 period instead of the 20,000 now expected to result from certain competitive disadvantages which tend to inhibit growth.

Since the District's industrial structure is heavily weighted by employment in national rapid growth industries, it shows a relative gain of 1,850 due to the industrial mix. Added algebraically to the 20,000 competitive loss of the District results in a total net relative shift downward of 18,150 jobs from the national all-industry growth. So while the District's economy is not projected to keep pace with the entire Nation between 1965 and 1975, the District does have a healthy mix of industries and is expected to compete well within the economy of the surrounding states.

The Northwest District is expected to increase its share of national employment in seven slow growth industries, two declining industries, and only one rapid growth industry. The slow growth industries are: transportation, communications, and public utilities; retail and wholesale trade; apparel; lumber; stone, glass, and clay products; primary metals; miscellaneous manufacturing. Agriculture and petroleum are the declining industries in which the District will increase its shares, and chemicals is the rapid growth industry in this category.

On the other hand, the Northwest District is expected to decrease its national shares of employment in eleven rapid growth industries, one slow growth, and three declining industries. The rapid growth industries are: construction; finance, insurance, and real estate; services; government; paper; rubber; fabricated metals; non-electrical machinery; electrical machinery; transportation equipment; instruments. Printing is the slow growth industry and mining, food, and leather products are the declining industries in which the District is expected to lose shares of national employment.

Despite the fact that the District is expected to gain shares of slow growth industries and lose shares of fast growth industries, the overall shifts in employment between 1965 and 1975 are to the rapid growth sectors. Employment in rapid growth industries is expected to grow from 53.7 percent of all jobs in 1965 to 56.5 percent in 1975; the change for slow growth industries is expected to be imperceptible - from 38.8 percent to 38.2 percent; among declining industries there is expected to be a decrease from 7.5 percent to 5.3 percent.

PROBLEMS

To achieve the projected future or to improve upon it, the people, resources, and facilities of the District must be used efficiently. A properly trained labor force capable of manning the jobs expected to develop is implicit in District growth and development; continued production of natural resources will be necessary, and improvement of public facilities - such as highways, airports, sewage treatment plants, waterworks, public schools, libraries, and hospitals - is unavoidable. These are the ingredients necessary in today's economic life.

In the Northwest District as elsewhere in Appalachia Pennsylvania, there is a three-way problem which involves identifying existing strengths or resources, determining the most important undeveloped potentialities, and then pinpointing the obstacles standing in the way of development. Usually, it is the last question that is most difficult to identify, but in the Northwest District, officials have prepared a list of problems and indicated which governmental units can help most in overcoming them. The District's development problems and deficiencies are:

*Lack of modern highway access to Interstate system from:
    Existing and potential industrial sites
    Existing and potential recreation areas
 (Requires County, District, and State efforts)

*Inadequate public sanitary sewer and water service to:
    Potential industrial sites
    Existing and potential recreation areas
 (Requires inter-municipal, county effort and State and Federal financial assistance)

*Water pollution from:
    Abandoned strip mines
    Inadequate treatment of domestic and industrial wastes
    Inadequate solid wastes disposal
 (Requires County, District, State, and Federal efforts)

*Lack of adequate housing:
  Rental and purchase
  Public housing (low and middle income and for senior citizens)

*Abundance of substandard housing
Lack of adequate land use controls and code enforcement
(Requires municipal and County effort with State and Federal financial assistance)

*Insufficiently developed recreational facilities (municipal, County, State, and Federal)
(Requires municipal, County, State, and Federal efforts)

*Underdeveloped human resources
Lack of vocational-technical school programs in operation
Absence of four year colleges in some sections of Region and lack of graduate study opportunity throughout Region
Lack of specialized manpower training and retraining programs
(Requires County, District effort with State and Federal financial assistance)

*Insufficient industrial diversification
Lack of specialized skilled labor
Out-migration of young adults
Declining industries
Lack of employment opportunities for women
(Requires County, District effort with State and Federal financial assistance)

*Inadequate natural resource conservation
  Strip mine desecration
  Poor woodland management
(Requires County, District, State, and Federal efforts)

*Lack of intergovernmental cooperation
(Requires municipal, County, District, State, and Federal efforts)

*Apathy and conservatism in rural sections
(Requires municipal and County efforts)

As seen locally, the obstacles to development run from bricks and mortar needs to the attitudes of the people themselves. In a more detailed examination of manpower, natural resources, and public facilities, some current efforts and proposed improvements can be seen.

MANPOWER

The Northwest District has experienced less disruption than many other districts in Appalachia where workers were trained for jobs no longer needed. Mining employment, for example, was never a dominant source of jobs although there are deposits of bituminous coal, limestone, and clay in the southern portion of the District. Thus, the problem of retraining displaced workers for new kinds of employment has not been a central issue for development officials. Instead, the major goals have been to replace factories that were closed and to get workers back into productive activity.

Even if retraining has not been a central issue in the District, training new entrants into the labor force has been because local development officials often need to demonstrate the ability of the labor force to perform jobs required by prospective employers. Toward this end, there has been an increased emphasis in the District on expanded vocational-technical training facilities. Prior to 1965, there was almost total reliance on private post-high school training for nurses (753 enrolled), business (360 students), and trades (515). This was in addition to shop, home economics, business machines, and similar courses offered to regular high school students. Since 1965, however, the District's counties have embarked on a large-scale construction program of vocational-technical schools directed at giving students specific skills needed by local employers. Four such schools scheduled for opening by 1969, costing $14.7 million, will have a pupil capacity of 2,930. They are located in Lawrence, Crawford, Erie, and Venango Counties. In Warren County, a vocational-technical school director has been hired and is preparing a plan for a school serving most of the County. And in Clarion County a director has been hired who will prepare plans for a school serving Clarion and eastern Forest Counties.

There are other programs for manpower development, one of the most notable being the Federally supported MDTA special courses for skills found to be in short supply. And Pennsylvania's own program has been used to train occupations not eligible under the MDTA program.

Currently in progress in the Pennsylvania Department of Public Instruction is a study to estimate the occupational needs in various areas of the State until 1975 and to measure training facilities required to meet these needs. The results of that work will enable manpower officials to adjust their curricula to the anticipated needs of the changing economy.

NATURAL RESOURCES

The role of natural resources in a mature industrial economy is less dominant than in a developing one, but where a basic industry like primary metals remains a large factor, raw materials feeding the furnaces remain important as well. Steel mills in the District receive iron ore from Minnesota mines, but coal, limestone, and refractory clays are produced locally.

Bituminous coal is mined in Clarion, southern Venango, Lawrence, and Mercer Counties, and clay deposits occur beneath these coal seams. Limestone for fluxing and for manufacture into cement is prevalent in Lawrence County. The report on "The Mineral Industry of Pennsylvania" by Charles C. Yeloushan, (in the 1966 Minerals Yearbook) gives a quick review of the importance of mineral production in the counties of the Northwest District.

Petroleum and natural gas have been important to the Northwest District and have accounted for much of the State's production since Colonel Edwin Drake drilled his first oil well near Titusville. By 1966, the District accounted for one-third of the 4.8 million barrels of crude petroleum shipped from the State's oil fields. Of the 1.6 million barrels shipped from the District, Warren produced 960,000, Venango 386,000, and Crawford 251,000, followed by lesser amounts from Clarion, Forest, and Mercer.

TABLE 23

1966 VALUE OF MINERAL PRODUCTION IN THE NORTHWEST DISTRICT

County	Value	*Minerals Produced in Order of Value
Clarion	$13,745,918	Coal, stone, sand and gravel, clays
Crawford	429,000	Sand and gravel
Erie	withheld	Sand and gravel, peat
Forest	310,000	Sand and gravel
Lawrence	withheld	Cement, stone, coal, clays, sand and gravel
Mercer	2,476,343	Coal, sand and gravel, stone
Venango	2,359,860	Coal, sand and gravel
Warren	644,000	Sand and gravel
Total	$25,480,196	

*Excludes value of natural gas, natural gasoline, LP gases, petroleum, and gem stones.
Source: Pennsylvania Bureau of Topographic and Geologic Survey.

Natural gas production is also widely prevalent although county figures on production are not available. Nevertheless, there is continued drilling activity - Warren led the State in 1966 with 168 new wells. Several deep wells have been drilled, particularly in Erie and Crawford Counties, and have resulted in gas strikes.

Of particular interest in the Northwest District is the presence of widespread salt deposits 50-100 feet thick which are not currently being mined. A special study on this subject is being prepared by the Pennsylvania Bureau of Topographic and Geologic Survey to emphasize the latent value of this resource for chemicals and related industries and the potential these deposits may represent for economic development. According to a report prepared by the U.S. Bureau of Mines and the U.S. Geological Survey (Mineral Resources of the Appalachian Region, 1968), "The outlook for the salt industry in Appalachia is promising...Major markets for salt are in close proximity to Appalachia's virtually inexhaustable salt resources."

Among the non-mineral natural resources, the District's forest lands are important, especially in those counties practically covered by forests - Forest (95 percent), Warren (85 percent), Venango (82 percent), and Clarion (67 percent). In all, as the table below shows, the District has an estimated 2.1 million acres in commercial forest land supporting a variety of wood using industries including one of the State's largest papermills located in Erie.

TABLE 24

NORTHWEST DISTRICT FOREST LAND IN 1965

County	Commercial Forest (acres)	Percent of Total Land Area
Clarion	258,300	67
Crawford	297,600	46
Erie	223,100	43
Forest	253,300	95
Lawrence	90,200	38
Mercer	159,600	37
Venango	355,100	82
Warren	494,400	85
District Total	2,131,600	61

Source: Pennsylvania Department of Commerce.

Proper use of natural resources has been a matter of controversy in Pennsylvania since late in the 19th Century, and the Northwest District contains many features of the problems attendant to the use of those resources. Parts of Clarion, Mercer, and Venango Counties have been disrupted by the surface mining of coal and need to be back-filled and planted. Coal mining has also contaminated many streams in these counties. Studies have been proposed by District officials in four places: Clarion County, where an estimated 21,000 acres of stripped land need to be reclaimed; Lawrence County around New Castle, where both coal and limestone strip mines are found; southern Venango County; and eastern and southern portions of Mercer County, where coal stripping is prevalent and acid pollution of streams is widespread.

Since public funding programs for the reclamation of abandoned strip mines require the land to be publicly owned, the land must be purchased by a public agency before conservation measures can be initiated. The Commonwealth of Pennsylvania has created a revolving fund to make such purchases.

Pollution of underground water supplies by abandoned oil and gas wells exists to an unknown extent in Clarion, Venango, Forest, and Warren Counties, and many of the District's streams have been contaminated by industrial wastes and untreated domestic sewage. A proposed study by the Commonwealth would detail the extent of pollution from abandoned wells; continuing studies by the Sanitary Water Board lead to regulatory actions in the cases of communities that dump insufficiently treated sewage into the State's streams and lakes.

PUBLIC FACILITIES

In addition to manpower and natural resources, the third major ingredient that makes our economy work is the infrastructure. Schools, bridges, highways, utilities, hospitals, libraries, airports, docks, canals - the range of improvements is broad and changes with new needs. To businessmen, the most important of these has always been improvements to transportation, and in the

Northwest Local Development District the transportation needs have been a central concern of development planners and businessmen alike.

HIGHWAYS

The District is criss-crossed by railroads which traditionally served the needs of coal mines, oil fields, steel mills, and logging mills, and it has an even more elaborate road system to which improvements are continually being added. Among these are three different sections of the Interstate highway system - I-90 connecting Erie with Buffalo and Cleveland, I-79 from Erie south through Crawford, Mercer, and Lawrence Counties to Pittsburgh, and I-80 from the east across Clarion, Venango, and Mercer Counties. When the system is completed, much of the District's population will be tied into this nationwide system. Erie, Meadville, Sharon-Farrell, Clarion, and Mercer will benefit most while other economic activity areas are 15 to 20 miles from these new routes. New Castle is about equidistant from I-80, I-79, and the Pennsylvania Turnpike. Oil City and Franklin are about 20 miles from both I-80 and I-79, while Titusville, Corry, and Warren are farther away.

Local development officials believe that connector highways are essential to serve Warren, Corry, Titusville, Oil City, Franklin, New Castle, and Ellwood City. The District's officials prepared a list of highway improvements needed and presented the list to the State Highway Commission at a public hearing in Meadville on November 1, 1967. These included major new routes, bypasses of communities, and access roads to important new District developments.

Among the major roads proposed is improvement of the highway between Erie and Binghamton, New York, a route which is programmed as part of the Appalachian Development Highway system. Another major proposal is a highway from Erie to I-80 in Clarion County to improve access for the Franklin-Oil City-Titusville economic activity area.

Still another route improvement cited by District leaders would connect Warren to I-80 at Barkeyville, replacing sections of U. S. 8, Pa. 27, and U. S. 6 now used to reach Warren from the southwest.

District leaders have proposed that the long-heralded Beaver Valley Expressway, which already is programmed by the State Department of Highways north from Pittsburgh as far as Sharon-Farrell, be extended north to Meadville. Another route following a river valley from the Pittsburgh area is the Allegheny Valley Expressway which district leaders recommend for extension beyond Kittanning to Brookville in Jefferson County. Included in several of these proposals are suggested alignments that will act as by-pass routes for the economic activity centers they connect.

Access roads have also been proposed. In Venango County, a 1½ mile link is needed to the Venango Area Vocational-Technical School which will open in 1969. The cost is estimated at $146,000. In Forest County, a 1/5 mile access road estimated to cost about $50,000 is needed from Pa. 36 to the Tionesta Recreation Area on the Tionesta Reservoir.

At Franklin a 1½ mile road and short bridge are needed to give access to the 110 acre publicly owned Barrett Flats industrial site. The bridge will cross Franch Creek from U. S. 322 to reach this industrial park, and arrangements have been worked out with the City of Franklin for rights-of-way and assumption of maintenance.

In the Erie economic activity area, access roads are needed to Elk Creek, a state park located on Lake Erie near Lake City, to Raccoon Creek, a county park a few miles west of Elk Creek, and to Six Mile Creek Park, another county park a few miles southeast of the City of Erie. With such roads, these parks can be developed and used as recreation alternatives to Presque Isle State Park in Erie which is now the most heavily attended state park in Pennsylvania.

Access roads are also needed to serve an industrial and research park in Erie, the New Bethlehem industrial area in Clarion County, and possible projects in Lawrence and Mercer Counties.

The completion of access roads and site development work to serve Erie's expanded port and pier facilities should receive a high priority.

HOUSING

Among the facilities cited by local officials as needed in the Northwest District, improved housing was ranked as third in importance behind highways and access roads. Already several projects are in various stages of development. In the City of Erie, a moderate income project (221(d)(3)) is being sponsored for development in an urban renewal project area by a non-profit group called "Citizens for Better Housing." The project (which could be ready to finance within one year) is considered necessary to aid families of low and middle income dislocated by the City's urban renewal projects. Initially it would consist of 20 units, with 80 more to be added later. A second Section 221 housing project is being discussed. Also in Erie, a public housing project of 200 units for senior citizens has been designed to meet what is termed a critical need in the central city of housing for the elderly.

In Meadville, 300 units of public housing are in the planning stage, with 150 of the units for the elderly and 150 for low income families. In New Castle, two housing projects have been planned - one to consist of 127 units for low income families, and the other of 150 units of housing for the elderly. Section 221 housing projects have been discussed in New Castle and Warren.

SEWAGE COLLECTION AND TREATMENT

The next most important subject of concern in the Northwest Development District is pollution abatement through the construction of new sewage treatment facilities.

A high priority project is a sewage treatment plant for Tionesta Borough which is adjacent to the Tionesta Reservoir. Although Tionesta has only 300 families and is unable to finance the $325,000 project without supplemental grants, sewage from the community threatens to affect the reservoir and the Allegheny River, and thereby destroy much of the area's tourist potential.

Other projects include the Bessemer Borough sewage treatment plant in Lawrence County, the Tidioute sewage treatment plant in Warren County, the Shippenville-Clarion area sewage treatment plant in central Clarion County, and the Marienville sewage treatment plant in Forest County.

In addition to these facilities, local officials also cite the need for the extension of sewer lines into areas not now served.

An improved metropolitan sewer and water system for Erie is now being discussed.

In the Meadville economic activity area, sewer line extensions estimated to cost $1.7 million are proposed to serve developing areas of Vernon Township, including the Meadville airport and an interchange of route I-79.

Around New Castle, the extension of sewer facilities into Union, Neshannock, and Shenango Townships has been planned at an estimated cost of $4 million. This project is based on a coordinated countywide sewage disposal plan already completed, and will reduce disposal costs and raise water standards throughout the New Castle economic activity area.

An extension of sewers at an estimated cost of $700,000 into Franklin, Sandycreek, and Sugarcreek Townships which surround Franklin has been recommended. Engineering studies have been completed, and assure regional economies through cost-sharing.

Studies to determine the most efficient sewage disposal systems are in progress in the Warren, Sharon-Farrell, Oil City, Titusville, and Ellwood City areas. Each of these is being undertaken to develop the most efficient area-wide disposal system in keeping with State laws and policies which require area-wide planning.

EDUCATION

The program given fifth priority by local officials is the expansion of vocational-technical schools. Four such schools are (as mentioned earlier) under construction while two others are in the early planning stages. The one now being planned in Warren County should be constructed as soon as possible. Only Mercer County is without a vocational-technical school or any prospects for one in the near future.

Another kind of education - college training - was given sixth priority. Two kinds of needs are cited by local officials: facilities for graduate study and establishment of two-year community colleges.

Graduate facilities are considered important for economic development because graduate research programs are often helpful to industries. Moreover, they provide opportunities for employees to get advanced training that is helpful in keeping companies abreast of changes occurring within their industry. A university level graduate school facility with science and industrial research and development capabilities is desperately needed in the Northwest District. Community leaders are now discussing the construction of such a facility in Erie under a consortium of the colleges, universities, and industries in the area. A laboratory or research center also should be constructed at Clarion State College.

There are 16 colleges or branches in the Northwest District. Half of them are private, with an enrollment of about 11,000. The other half are publicly owned, and include Clarion State College, Edinboro State College, and branches of both these colleges plus two branches of Pennsylvania State University and one of the University of Pittsburgh. These publicly owned colleges have an enrollment of about 7,300. Community colleges are being considered in Erie, Crawford, Lawrence, and Mercer Counties.

STRIP MINE RESTORATION

According to local leaders, the need for strip mine restoration ranks closely behind the need for college facilities. Several studies are needed to determine the extent of the problem and the cost of reclamation.

HOSPITALS

There are 3,100 hospital beds in 21 hospitals throughout the Northwest District; expanded and improved hospital facilities are needed in several sections of the District.

The Erie community has successfully completed a $6 million fund drive; the money will be divided between Hamot and St. Vincent Hospitals. Included in the Hamot Hospital construction program is a mental health facility estimated to cost about $668,000. Appalachian program funds have been requested to help finance this project.

Another urgently needed project is the expansion and improvement of St. Francis Hospital in New Castle to make its beds conforming ones.

In Clarion County, an opinion poll rated a new medical hospital as important particularly because of the rapid expansion of Clarion State College which is overburdening the existing 41 bed osteopathic hospital in Clarion Borough. No study of needs and costs has yet been undertaken.

Vallonia Industries (Crawford County Sheltered Workshop) in Meadville has been organized to train physically, mentally, and emotionally handicapped persons. A construction project has been planned to provide facilities needed to serve the area.

AIRPORTS

In the Pennsylvania Aeronautics Commission's 1967-72 Airport Plan, a variety of needs at many of the District's 35 airports is cited. Both the Chess-Lamberton and the Port Erie airports (the two in the District with scheduled airline service), three general aviation airports with hard surface runways 1,500 or more feet long, and four smaller general aviation airports are noted for improvements.

In Clarion County, the site of a new airport to cost about $675,000 has been approved by the FAA. This airport should be constructed as soon as possible. A runway extension at the Meadville airport also is needed.

NORTHWEST DISTRICT DEVELOPMENT GOALS

District leaders have focused their thinking on nine goals and objectives which they feel are necessary for sound social and economic development. They are:

1. Expansion of existing enterprises and the promotion of new economic activities;
2. Development of a diversified and balanced economic base, emphasizing service facilities for existing enterprises;
3. Improvement of physical conditions, public facilities, and utilities;
4. Enlargement of educational and retraining facilities and programs;
5. Promotion of research and development programs in industry and in specialized institutions;

6. Establishment of regional research and action programs to maintain economic stability, recognizing the close practical relationship which exists between and among the economic activity areas of the District with similar development problems;

7. Increase and improvement of existing and new transportation systems;

8. Encouragement and promotion of close cooperation among all elements of the area in relation to any and all aims;

9. Establishment of a firm financial basis for the achievement of all goals and objectives.

Growing out of these points are numerous action programs that these leaders feel must be pursued to achieve the goals. Included in the listing of these programs is the level of government which these leaders consider most appropriate for action although it is conceded that there is often an overlap in jurisdiction and that municipal or county governments may have authority, but not the resources, to take necessary action.

The order of this listing does not indicate any priority among programs since many of them must be undertaken simultaneously. Others, clearly, precede or follow one another.

Action Programs

Highway construction of modern connectors to Interstate System (State)

Construction of Development Highways (Philadelphia to Erie and Erie to Jamestown) (State and Federal)

Construction of local access roads to existing and proposed recreation areas and industrial sites (municipal, State, and Federal)

Construction and improvement of internal road network (municipal and County - Liquid Fuels Fund from State)

Construction of by-pass highways of existing urban centers using controlled-access principle (State)

Subsidize Mass Transportation Systems in economic activity centers (State)

Encourage shuttle air service between existing airports of Region and to major economic activity centers of adjacent regions of tri-state area (District and State)

Accelerated acquisition and development of programmed recreation and historic facilities (County, State, and Federal)

Program acquisition and development of more recreation facilities (State and Federal)

More stringently enforce clean stream laws of Pennsylvania, particularly those relating to industrial waste, including active strip mines (State)

Restore abandoned strip mine areas and polluted waterways (State and Federal)

Continued emphasis on natural resources conservation (County, State, and Federa

Construction of new or expanded public sanitary sewage treatment and collection facilities (municipal, State, and Federal)

Construction of new or expanded water treatment and distribution facilities (municipal, State, and Federal)

Initiate area and countywide solid waste disposal programs

Conduct research method of economical but safe on-site sewage disposal for rural areas and outlying recreational centers (State)

Construction of programmed and proposed flood control projects (State and Federa

Advance land acquisition of easements and installation of public utilities (wat and sewer) to sites for more immediate use for residential, commercial, and industrial purposes (State and Federal)

Prepare an up-to-date inventory of potential sites for industrial development (Counties, District)

Site development of potential industrial development sites (Counties, State)

Accelerate public housing programs for low and middle income families and senior citizens (Cities, Counties, State, and Federal)

Continue on an accelerated basis urban renewal programs (Cities, Counties, State, and Federal)

Adoption of better land use controls (municipalities and Counties)

Better code enforcement (municipalities, County, State, Federal)

Initiation of Model Cities program on multi-municipal or County basis (municipalities, Counties, State, and Federal)

Increased emphasis on community action programs for the socially and economically underprivileged (County, State, and Federal)

Establish a program of rural renewal (State and Federal)

Conduct extensive study of Region (and sub-area) projected shift in employment and population (District and State)

Develop and initiate manpower training and retraining programs based upon findings and conclusions of the above study (Area Vo-Tech Schools, State)

Encourage expansion of existing higher education to afford 4-year college training in areas lacking, afford more opportunity for graduate study throughout District, and introduce research and development programs (District, State)

Alter present enabling legislation to authorize greater involvement of counties in matters of community development and restructure existing county government to perform a much greater diversification of services (State)

Establish mandatory training programs for local officials (State)

As the earlier review of resources and problems indicated, many specific projects have already been initiated to achieve some of these goals. Others will be initiated in subsequent years. The Pennsylvania Appalachian Development Plan seeks to incorporate these District objectives and projects in a coordinated approach to economic and social development.

TURNPIKE LOCAL DEVELOPMENT DISTRICT

Six counties of southcentral Pennsylvania have formed the Turnpike District Planning and Development Commission. They are Bedford, Blair, Cambria, Fulton, Huntingdon, and Somerset, and they form three rows between Tuscarora Mountain on the east and Laurel Hill on the west. The southern boundary is the Pennsylvania-Maryland state line and to the north lie Clearfield and Centre Counties.

The Turnpike Local Development District straddles two physiographic provinces - the Ridge and Valley Province in which Fulton, Bedford, Huntingdon and Blair Counties are located, and the Appalachian Plateau to the west in which Cambria and Somerset are found. The impact of this terrain and the mineral resources of the area have been in evidence since the days of the earliest settlements in the District.

Because of the rugged terrain found in the Ridge and Valley Province, the District's rivers carved the earliest transportation routes and where they joined, created advantageous sites for settlements. The Pennsylvania Canal was built up the Juniata River to Hollidaysburg, and canal boats were hauled over the Allegheny Front to Johnstown on ingenious inclined planes. When the railroad supplanted the canal, much the same route was followed except that Altoona became the last point before moving up over the Front. It was here that the Pennsylvania Railroad based extra engines for moving trains over the one thousand foot escarpment, and had its shops to repair and build many of its locomotives and cars.

Johnstown, on the canal route west of Allegheny Mountain, was located where tributaries joined the Conemaugh River, and it was as naturally the route for the railroad. More than that, however, Johnstown was centered among iron deposits which became the basis for the area's many iron furnaces. Coal deposits were found in both Cambria and Somerset Counties. Johnstown was thus ideally suited to become a leading steel manufacturing center.

Those early influences of topography and resources are still apparent today. The earliest settlements are being altered slightly, while the original reasons for being have lost most of their importance. A deeply changed economy is now apparent as is revealed in the changing structure of the District's economic activity areas. As for the rural areas of Huntingdon, Fulton, Bedford, and Somerset Counties where farming has always been the dominant activity, they are undergoing changes also - changes caused by the economics of agriculture.

ECONOMIC ACTIVITY AREAS

The new economic conditions best become apparent in a review of each of the District's economic activity centers and the hinterland where the center dominates business and social activity.

ALTOONA is the largest City in the District and the focus of the second largest economic activity area. Located in the center of Blair County in Logan Valley between Brush Mountain and the Allegheny Escarpment, the City had an estimated population of 71,000 in 1965 (up 1,600 from its 1960 low). This resurgence of population growth is thought to reflect the economic changes that have recently occurred in and around the City.

In addition to the center city population, about 60,500 persons live in the adjacent urban areas of Duncansville, Hollidaysburg, and Tyrone and the surrounding townships of Logan, Allegheny, Antis, Blair, and Frankstown. Most of the urbanization is occurring along the valley floor. The rural hinterland extends beyond Blair County to sections of Huntingdon, Bedford, Cambria, and Clearfield Counties. This hinterland population is estimated to be 29,400 - or one out of five residents of the economic activity area. The population is an estimated 159,300 total for the area.

Altoona achieved a population peak of 82,000 in 1930 and has steadily declined, according to each subsequent census report, following closely the decline in employment needed by the railroad. Today, the largest single employer in the Altoona economic activity area is still the railroad which recently called back 1,000 idle employees to work in its shops. This brings total railroad employment to approximately 5,800; of these, 4,200 work in shops and the remainder are divisional employees in operational and maintenance crews. With the merger of the Pennsylvania and New York Central Railroads, the outlook for future railroad employment in the economic activity area is relative stability.

Other major sources of employment in order of importance are wholesale and retail trade with 7,700 employees, services with 6,500, and government with 5,800. Manufacturing, with slightly less than thirty percent of total employment throughout Blair County, is concentrated in the Altoona economic activity area. Here is found more than 11,000 of the County's 14,000 total manufacturing employment. The leading manufacturing industries are paper (1,650 jobs), textiles (1,400), electronic tubes (1,300), and shoes (1,200).

Among manufacturing industries, there is relatively more female employment than in the economic activity centers of the Northwest Local Development District. Here, 42 percent of the manufacturing jobs are held by females, and the great bulk of these occur in textiles, apparel, footwear, and electronic tubes - industries with low wage scales generally.

Between 1960 and 1967, Blair County employment rose only 1,800, but within the economy substantial shifts were occurring - the major one being the continued decline of railroad employment - by about 3,800 jobs. Total non-manufacturing employment declined slightly as other sectors expanded to compensate for railroad employment losses. More importantly, during the same period manufacturing employment expanded by 2,900 jobs, a growth never before achieved by the area.

With a predicted stability in railroad employment and continued aggressive industrial development activity, the outlook for future growth is considered more promising than at any time in the last two decades.

JOHNSTOWN is the District's largest economic activity area with an estimated 1965 population of 183,900. Johnstown itself lost an estimated 7,400 persons between 1960 and 1965, bringing its total down to 46,500, while the population of surrounding townships and boroughs remained stable or increased slightly. The urban area that comprises the Johnstown economic activity center is estimated to have 105,900 people while the hinterland which covers most of Cambria and some of Somerset Counties contains an estimated 31,500 people.

Johnstown's population reached a high in 1920 when the total was 67,000; it remained close to this figure until 1950 when it dropped to 63,000, and later to 53,000 in 1960. Population estimates suggest that with the exception of certain townships such as Upper and Lower Yoder, Westmont, Jackson, Richland, and similar places where new development is occurring, a population decline is occurring in much of Cambria County as well as in Johnstown. The 1960-1965 estimated population loss for the County was 10,000, including the 7,400 loss experienced in Johnstown.

Economic conditions probably explain the continued decline. Since 1960, total employment has increased about 3,000 in the Johnstown labor market area although manufacturing employment dropped one thousand. Mining, which has been an important part of the local economy until the last few years, stood at 20,600 jobs in 1950 and declined to 6,300 jobs in 1960. Since then it has continued downward to 4,800 jobs in 1967, a level it is expected to maintain before beginning to increase slowly.

Steel is the dominant industry of the Johnstown economic activity area. The giant Bethlehem Steel Works stretches along the Conemaugh Valley for eight miles through the City of Johnstown and currently employs about 13,500 workers in 12 mills and a railroad car plant. Nearby is the Johnstown Works of U. S. Steel which specializes in steel castings, mill machinery, and industrial cars.

Employment in the steel industry has been shrinking in recent years as a result of modernization of steel production, dispersion of markets, and other economic and technical considerations. In Johnstown, oxygen furnaces are being installed that will produce 10 million tons of steel annually. A new annealing facility for wire products has been built, a vertical continuous casting unit with a capacity of 30,000 tons per month has been announced, and a new heat treating furnace capable of handling 12,000 to 14,000 railroad car wheels a month is under construction - all of which suggest continued high production of steel in Johnstown even if some of these new processes result in fewer jobs.

The importance of steel in the economy of the Johnstown economic activity area is revealed quickly by the fact that Cambria County had 22,700 manufacturing employees in 1966 and 19,400 of these were in the City of Johnstown. Steel accounted for 15,900 workers - 70 percent of the County's manufacturing work force and 82 percent of the City's. Apparel, with a City employment of 1,627 in 1966, was the only other manufacturing category with more than a thousand jobs. The high proportion of jobs in steel accounts for the fact that only 17 percent of manufacturing jobs are held by females.

To emphasize the degree to which Johnstown is the focus of economic activity, a commuter survey of steel workers revealed the distances employees travel to work: of 13,500 employed by Bethlehem Steel, less than 9,000 traveled under 7 miles from home to the steel mills; 2,400 traveled from 7 to 15 miles; 821 from 15 to 22 miles; 160 from 22 to 30 miles; 239 from 30 to 37 miles; 111 from 37 to 45 miles; 40 from 45 to 52 miles; 4 from 52 to 60 miles; 244 from 60 to 70 miles.

Johnstown also is the focus for non-manufacturing employment, and acts as a retailing and wholesaling center for the Cambria-Somerset Counties labor market area where trade, services, and government are also leading sources of employment. These are industry groups for which both national and district growth expectations are good. During the 1960-1967 period in the Johnstown labor market area, trade employment took a dip and regained its losses by achieving a 12,300 job level; at the same time service employment expanded by 2,200 to a new high of 11,500 jobs, and government jumped from 8,500 to 11,500 jobs. Representative of this increase in government employment is that resulting from the construction of a vocational rehabilitation center in 1959 which now is being enlarged. Total employment in Cambria and Somerset Counties at the end of 1967 was estimated to be 86,400, with an unemployment rate of 5.5 percent.

EBENSBURG is a second economic activity center included in the Johnstown economic activity area. Ebensburg (population 4,100) is the Cambria County seat and the location of both the Cambria Home and Hospital and the Ebensburg State School of mentally retarded children. The latter has an employment of 760, and largely accounts for the estimated 50 percent of all jobs in the Ebensburg activity center being in government employment. Another large portion of employment derives from mining in three large mines in nearby Cambria Township.

A defense manufacturer employing 250 men and a rapidly growing consulting engineering firm are among new sources of employment in the center. Total manufacturing employment is 415. A new coal cleaning plant recently was constructed near Ebensburg at a cost of $26 million, giving some indication that mining will be a continuing source of jobs during the coming decades.

HUNTINGDON is the third largest economic activity area in the Turnpike District with a total population of 26,100 which is concentrated around the County seat of Huntingdon County. Located in the eastern part of the District, three boroughs - Huntingdon (population 7,200), Mount Union (4,091), and Smithfield (2,547) - plus an urban fringe with an estimated 4,500 population comprise the economic activity center. In turn, a hinterland with an estimated 7,000 population is served by the economic and social facilities of the center.

In Huntingdon and nearby Smithfield Township, the leading sources of manufacturing employment are a glass plant (821 jobs), electrical machinery (344), apparel (284), and rubber (245). Most employment in the Huntingdon labor market area is concentrated in the economic activity area just as is most of the population. Of the 13,300 total estimated county employment in 1967, manufacturing supplied 4,500 jobs, an increase of 1,000 jobs over 1960. Other major sources of work reported in 1967 were government (1,800), retail and wholesale trade (1,400), services (1,300), and farming (1,100).

During the 1960-1967 period, the unemployment rate in Huntingdon County has dropped from 9.9 to 5.0 percent of the civilian work force. Even the 1960 rate was considerably down from two years before when Huntingdon, like most other District economic activity areas, suffered 13 percent or more unemployment. The center's dependence on apparel and on stone, clay, and glass for over half of its manufacturing employment has resulted in marked economic slumps when these industries, because of swings in national demand, had poor years.

Juniata College in Huntingdon with an enrollment of 1,010 has been a stable source of employment and the focus for educational and cultural affairs in the area.

SOMERSET, county seat of Somerset County, is the center of the

District's fourth largest economic activity area with a population of 24,200. Located at the interchange of the Pennsylvania Turnpike with U.S.219 (an Appalachian Development Highway) Somerset has a 6,300 population and is surrounded by an urban fringe with an estimated 5,000 people and a hinterland of 12,900 people. Somerset itself has three small manufacturing plants which provide less than 300 jobs producing leather goods, rubber products, and instruments.

For statistical purposes, employment information for Somerset County is incorporated in the labor market reports of Johnstown. However, farm employment in the Somerset economic activity area is known to be of considerable importance since Somerset has traditionally been a small marketing and supply center for farmers. Somerset is the District's leading agricultural county with $16.4 million in farm receipts reported in 1965. Of the County's 1,720 farms, 93 percent are devoted primarily to livestock, which really means dairying. Over $13 million of its total farm receipts come from dairy products.

BARNESBORO-SPANGLER is an economic activity area in northwestern Cambria County with an estimated 19,000 population; about 10,100 is in four boroughs - Barnesboro (3,035 people), Spangler (2,658), Patton (2,880), and Carrolltown (1,525). Another 7,500 people are estimated to live in the surrounding urban fringes in five townships, while an additional 1,400 live in the hinterland of this economic activity center.

This is bituminous coal country, and these communities were originally known as coal mining towns. By the end of 1967, there were still 26 mining companies operating in the activity area employing an estimated 1,400 workers - 840 of whom were employed by one company.

The continuing downward spiral of mining employment which plagued these communities, and much of Appalachia, for years appears now to be halted. Indeed, the area's leading coal producer averaged one million tons annually from 1923 to 1957 and last year mined 3.2 million tons. Three mine-mouth generating stations have been located in Cambria and nearby Indiana Counties creating a renewed power company market which promises that this single company will increase production by at least 40 percent in the next few years.

In the 6,800 estimated labor force of the economic activity area, the current 1,400 mining employment is a fifth of the total and therefore a key to the prosperity of the area. There are eight manufacturing industries in the area - five apparel manufacturers and three producing leather goods - with twelve hundred employees. Two-thirds of these employees are women.

Much of the labor force is not employed locally. As the Johnstown summary noted, there is widespread commutation, and local officials report that many former miners in the Barnesboro-Spangler economic activity area commute to steel mill, contruction, railroad, and government jobs. This commutation is made difficult, according to these officials, by poor roads and insufficient bus service.

BEDFORD-EVERETT is an economic activity area which lies athwart the Pennsylvania Turnpike in Bedford County and has an estimated population of 15,900. The boroughs of Bedford (the county seat, population 3,700) and Everett (2,300) create the small urban nucleus surrounded by additional urban development of 6,300 and a rural hinterland of approximately 3,600.

The Bedford interchange of the Pennsylvania Turnpike with U.S. 220 (an Appalachian Development Highway) has stimulated much of the new development in the economic activity area and attracted trucking companies needing terminal facilities. Most of the area's manufacturing jobs are found within Bedford, Everett, and Bedford Township. Of the economic activity area's 1,525 manufacturing jobs, the major sources of employment were one apparel plant (577), one leather goods factory (362), and three printing plants (195) at the end of 1966.

Throughout the entire labor market area, which is all of Bedford County, manufacturing is reported to be the second largest source of employment with 2,100 jobs at the end of 1967. The largest source of employment was retail and wholesale trade with 2,400 jobs. Other leading industry groups were government (1,800 jobs), farming (1,400), and services (1,400).

Intense industrial development and tourist promotion activities of recent years have introduced an estimated 1,100 jobs in the past seven years at a local cost of $13 per capita. Included among the new employers are a shoe company, a toy factory and headquarters offices, an electrical manufacturer, a producer of business forms, and two trucking facilities. Offsetting some of these gains was the loss of a trucking company employing 128 drivers and 50 maintenance personnel. At the end of 1967, unemployment in the Bedford labor market area was estimated to be 8 percent of the civilian work force.

MEYERSDALE, an economic activity area in southcentral Somerset County, has an estimated population of 8,900, of which 3,000 people live in Meyersdale, 1,500 in the immediate environs, and 4,400 in the hinterland served by the center's economic and social institutions.

Aside from local sources of employment including 614 manufacturing jobs, the area is oriented toward Cumberland, Maryland, 25 miles to the southeast. Like Somerset, Meyersdale employment estimates are included in those developed for the Johnstown labor market area which includes both Cambria and Somerset Counties. Therefore, separate estimates are not available, yet the character of the community is similar to Somerset in that it has traditionally been a small agricultural center for southern Somerset County. Its manufacturing employment is concentrated in apparel (444 jobs) and furniture (117); three-quarters of these jobs are held by women, suggesting that this employment largely supplements family incomes in the area.

McCONNELLSBURG, the county seat of Fulton County, is a small activity area with an estimated 2,900 population. The Borough of McConnellsburg has 1,200 people, and is surrounded by 500 people on its fringes and 1,200 people in the hinterland. A new apparel plant with 600 employees has recently located there, expanding work opportunities for women.

The greatest asset of this area is reported to be its potential for tourist development. It is located at the intersection of Routes U.S. 30 and 522 which connect to the Turnpike and the Interstate highway system, and nearby are Buchanan State Forest, Cowans Gap State Park, President Buchanan's Birthplace, and similar attractions.

DISTRICT CONDITIONS

THE PEOPLE

There is a high degree of urbanization in the Turnpike District. By 1965, slightly over two-thirds of the 503,400 population was estimated to be urban in character, and most of this population was concentrated in Blair and Cambria Counties around the District's two largest economic activity centers - Altoona and Johnstown. Another measure of the District's urban character is revealed by the fact that 71 percent of the total population is estimated to live in the economic activity areas described above.

The 1965 population is more than 7,000 less than the District's 1960 total, a decrease of about one and a half percent. When natural increase (births in excess of deaths) is computed, an additional loss of 20,000 for the five-year period is revealed. Thus, there was out-migration of about 27,000 in the first half of the sixties.

That loss, while a considerable disappointment to local officials who are attempting to create sufficient work opportunities to keep people in the

District, is somewhat less than the losses of the fifties when the District lost 76,139 people. The losses have been uneven and continue to be uneven, although Cambria and Blair with the largest populations remain the largest absolute losers. Both Blair and Somerset, large losers in the fifties, seem to have cut their rate of loss in half. Cambria, however, shows a five-year loss in the sixties which, if it continues, will exceed its loss in the fifties.

TABLE 25

OUT-MIGRATION FROM COUNTIES IN THE TURNPIKE DISTRICT

County	1950-1960	1960-1965
Bedford	- 4,167	- 276
Blair	- 16,044	- 4,619
Cambria	- 35,568	- 18,081
Fulton	- 1,216	+ 707
Huntingdon	- 5,911	- 1,412
Somerset	- 13,233	- 3,332
District total	- 76,139	- 27,013

Source: U.S. Bureau of the Census; Pennsylvania State Planning Board Estimates.

One of the greatest concerns resulting from continued out-migration is that the population losses are disproportionately high among young adults - those people who are looked to for new ideas, enthusiasm, energy, and leadership in any community. No age breakdown of out-migrants is available for the 1960-1965 period, but in the fifties 29,535 of the 76,139 persons who left the District were between 20 and 29 years of age.

Trends are, of course, at best indicative of past conditions - conditions which, for one reason or another, may not continue into the future. For the Turnpike District, there is particular reason not to extend into the future the past population trends. Indeed, as mentioned in the description of the Altoona economic activity area, more new manufacturing jobs have been created there in the past seven years than in any comparable period. And if people follow jobs in the crudest sense - that is, if decent economic conditions have to exist to hold people in an area where they may be born, raised, and educated - then there is reason to expect that rates of out-migration have declined even further since 1965 in many sections of the District.

Using the same method mentioned in the discussion of the Northwest District (and which will be used throughout this Plan) population for 1975 is being estimated on the basis of the employment projected for that date. It is a method which presumes lower unemployment rates than prevail today. (The rate

TABLE 26

TURNPIKE DISTRICT POPULATION BY COUNTIES FOR 1960, 1965, AND 1975

County	1960	1965	1975
Bedford	42,415	44,700	46,150
Blair	137,270	137,000	140,250
Cambria	203,283	193,000	192,500
Fulton	10,597	11,900	13,000
Huntingdon	39,457	39,800	42,200
Somerset	77,450	77,000	80,070
	510,472	503,400	514,170

Source: U.S. Bureau of the Census;Pennsylvania State Planning Board Estimates and Projections from 1965 to 1975.

in 1965, for example, was 7.3 percent for the Turnpike District; it is assumed that any rate in excess of 3.5 percent in 1975 will be diminished by out-migration. Therefore, these population estimates derived from employment projections tend to be conservative.)

The estimated 1975 population for the Turnpike District will be 514,170 people, representing an increase of about 10,800 over the 1965 figure.

As the table reveals, slight absolute increases from 1965 to 1975 are predicted for all counties except Cambria, where the population will be about static during the decade. Even in those counties where gains are forecast, they are far from dramatic, and without going into details for each county and labor market area, the reason is that job growth continues to be slow. In the case of Cambria County, the two leading industries - steel and coal - continue to be automated, resulting in either slow growth or outright losses. Other employment sectors are growing too slowly to absorb both the existing jobless workers and all of the new entrants into the work force.

There have been striking gains in manufacturing employment in Blair County, as was mentioned in the description of the Altoona economic activity area. These gains plus new jobs predicted in several non-manufacturing sectors promise to offset losses in railroading that may occur by 1975. Elsewhere, the modest population growth is simply a reflection of the modest employment expectations in the several counties of the District.

If the employment forecasts and the resulting population estimates become a reality, migration from the Turnpike District would be slowed considerably. Only 15,935 people would be lost over the 1965-1975 decade instead of the 76,000 lost in the fifties. Again most of the loss would be experienced in Cambria County, which would lose about 10,900 of the total; Blair would lose about 2,500, Bedford about 1,900, and Somerset about 800. Huntingdon would provide enough jobs for all its natural increase and therefore neither gain nor lose population by 1975, while Fulton would attract about 300 in-migrants.

Perhaps the greatest utility of these projections of future population is to alert local officials to trends and changes taking place around them, and when the expectations for growth are poor or when continued losses are predicted, to give them some insights into causes. Then, they have the option of acting to avoid future conditions they consider undesirable. Certainly in the case of population losses, most public officials view out-migration as unfortunate since the community has gone to great expense preparing youngsters to be productive citizens.

EMPLOYMENT

Jobs, as stated above, are the key to these projections. In developing population estimates, the basic assumption was that people follow jobs, and not the reverse. Hence, the population forecasts are totally dependent on the assumption made about the Turnpike's District's 1975 economy. As mentioned in the previous chapter and as elaborated in the Appendix, total State employment for 1975 was allocated to the various labor markets of the State in accordance with recent changes in shares of employment in each industry group. Thus, an area might have a substantial proportion of total employment in a particular industry, but the share of total State employment in that industry may have been declining. Such an area would receive a continuing decline in shares of the State total and thus grow more slowly than other areas that have been more competitive.

In the Turnpike Local Development District, agricultural and wage and salary employment* increased 6,600 from 1960 to 1965. Many of these were new jobs which were needed to bring total employment back to previous levels. (During the same period, unemployment dropped from 13.3 to 7.3 percent of the work force. And future employment growth presumably will bring this rate down to a manageable 3.5 percent.)

During the 1965-1975 period, the increase in agricultural and wage and salary employment for the District is expected to reach 16,800 jobs. This is an 11.6 percent increase as opposed to the 4.8 percent change of the 1960-1965 period. Annually, the earlier rate is actually less than one percent per year and the projected rate is little more than 1 percent.

Since manufacturing is looked to by local officials to fill the pockets of workers and to provide regular payrolls that move the economy, the 4,900 expected new manufacturing jobs may be taken as the key to the 1965-1975 decade. They represent only a 10 percent increase during this period, while the national economy is expected to grow at twice this rate. However, the expected manufacturing growth rate of the entire State is about the same as that of the Turnpike District. The fact that the Turnpike District and Pennsylvania are expected to grow at the same rate in manufacturing industries reflects the concentration of the large slow growth industries which characterize both the State and this smaller area. It is the dominance of steel employment in the Turnpike District and the absence of expected employment increases in that industry which make manufacturing growth expectations sluggish.

The parallel between the Turnpike District and the State may be illusory, however. This is particularly true when comparing the total economy

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*Shown as a sub-total in Table 27. Methods for estimating self-employed and unpaid family and domestic workers are being changed so that comparisons from 1960 to 1975 are impossible. Thus, this category is excluded in this discussion of employment changes although it is included in the total shown in Table 27 .

TABLE 27

TURNPIKE LOCAL DEVELOPMENT DISTRICT EMPLOYMENT (IN THOUSANDS)

Industry Group	1960	1965	1975
Agriculture	6.9	6.5	5.4
Mining	6.6	5.4	4.8
Contract Construction	3.5	3.8	5.8
Transportation, Communications, Public Utilities	18.2	16.2	15.3
Trade	23.5	22.9	25.2
Finance, Insurance, Real Estate	3.3	3.4	3.9
Services	17.3	19.3	22.8
Civilian Government	16.1	19.0	25.2
Manufacturing	42.0	47.5	52.4
Food	3.8	3.6	3.2
Tobacco	*	*	- -
Textiles	1.3	1.6	1.7
Apparel	6.7	8.0	8.9
Paper	2.5	2.4	2.8
Printing	1.2	1.6	1.8
Chemicals	0.1	0.2	0.2
Petroleum	*	0.1	0.1
Rubber	*	0.3	0.5
Leather	2.3	3.2	3.5
Lumber, Wood	1.2	1.4	1.7
Stone, Clay, Glass	2.8	2.0	2.4
Primary Metals	12.7	13.7	13.8
Fabricated Metals	1.0	1.1	1.9
Non-electrical Machinery	1.0	2.7	2.4
Electrical Machinery	1.2	2.1	3.2
Transportation Equipment	3.8	2.7	3.1
Instruments	0.4	0.6	0.8
Miscellaneous Manufacturing	*	0.2	0.4
Sub-total Agricultural and Wage & Salary	137.4	144.0	160.8
Self-employed	17.2	17.8	14.8
Total	154.6	161.8	175.6
Unemployed	20.6	10.9	6.1**

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* Fewer than 50 employees.

** 3.5% unemployment rate assumed as point at which out-migration begins.

Source: Pennsylvania Department of Labor and Industry, Bureau of Employment Security; Pennsylvania Department of Internal Affairs; Pennsylvania State Planning Board.

during the recent past. Had the District performed as well as the State between 1960 and 1965, total wage and salary employment would have increased by 9,890 jobs instead of the 6,600 actually realized. Thus, there was a downward shift, a relative loss, of about 3,280 jobs. This poor performance of the Turnpike District relative to the State is attributable to two factors:

*83 percent (or 2,710) of the jobs that failed to materialize can be explained by the unfavorable mix of industries, and

*17 percent (or 570) of the unrealized jobs can be explained by the District's inability to compete effectively with the rest of the State for new employment growth.

The differential shift table in the Appendix which compares the Turnpike District with Pennsylvania for the 1960-1965 period further reveals the major contributors to the District's unfavorable industrial mix - transportation, communication, and public utilities (-2,270 jobs); mining (-2,100); and agriculture (-1,270).

Major losses from decreasing competitive advantages in the District occurred in trade (-3,840 jobs), transportation equipment (-1,690), and transportation, communication, and public utilities (-1,040).

These and other losses shown in the table more than offset gains made by other industry groups, yet the gains are significant since they suggest which industry groups show the most promise for future growth. Those experiencing upward shifts as a result of demonstrated increasing ability to compete with the rest of the State were non-electrical machinery (+1,550 jobs), leather products (+1,000), electrical machinery (+900), apparel (+750), and primary metals (+640).

A summary of the shifts that occurred in the Turnpike District among major industries shows how they performed relative to the State.

TABLE 28

TURNPIKE DISTRICT INDUSTRIES EMPLOYING 5,000 OR MORE IN 1965

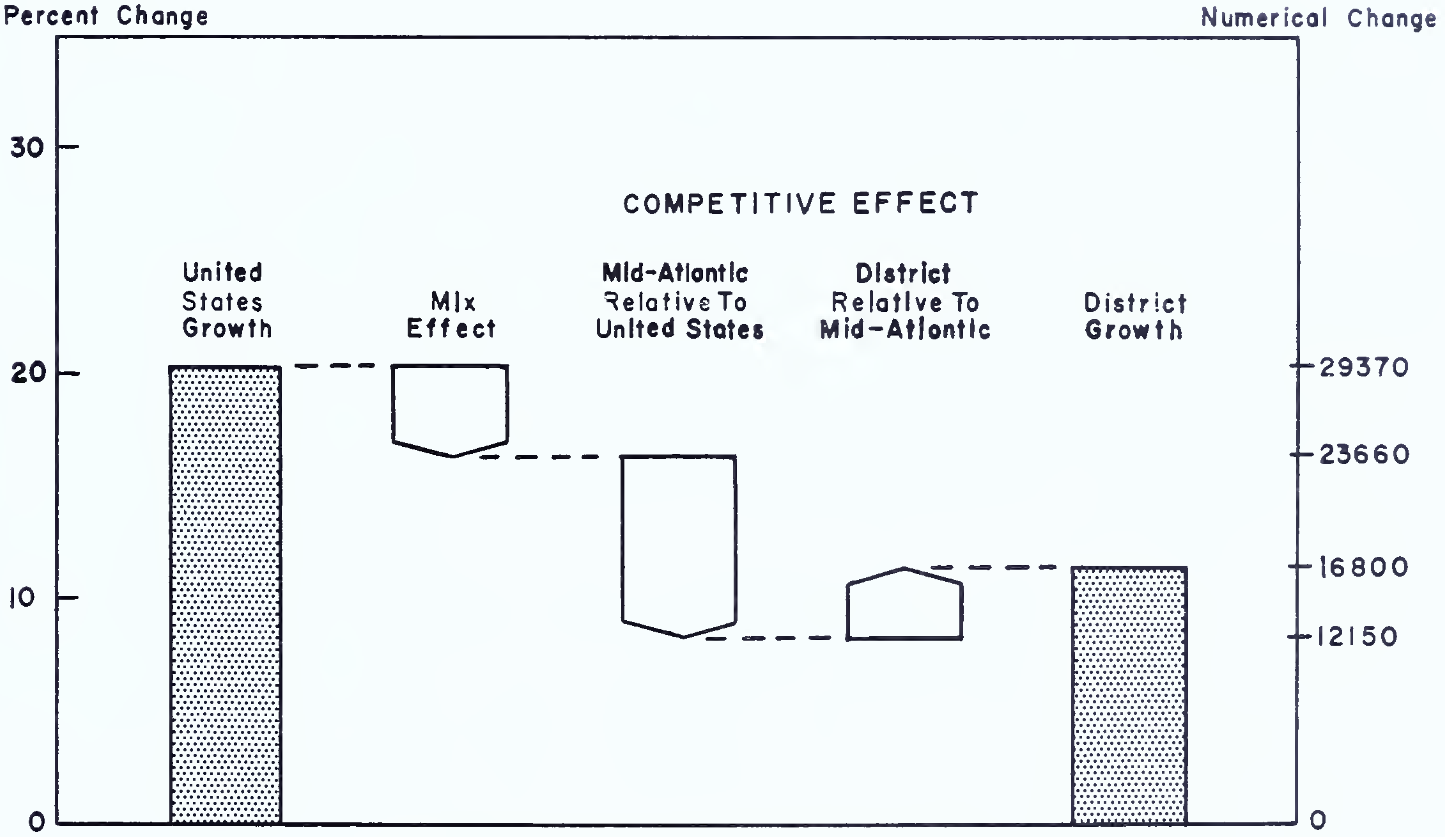
Industry Group	1965 Employment	State Growth Characteristic 1960-1965	District Growth Relative to the State
Trade	22,900	rapid growth	below average
Services	19,300	rapid growth	below average
Government	19,000	rapid growth	above average
Transportation, Communications, Public Utilities	16,200	declining	below average
Primary Metals	13,700	slow growth	above average
Apparel	8,000	rapid growth	above average
Agriculture	6,500	declining	above average
Mining	5,400	declining	above average

Source: Pennsylvania State Planning Board.

The slow growth of trade and services may be surprising since these sectors have accounted for considerable growth nationally. One explanation for their sluggish growth is that they seem to develop best under conditions of general prosperity when incomes are rising. The District's high unemployment rates - 13.3 percent in 1960, 15.4 percent in 1962, and 7.3 percent in 1965 - suggest exactly the opposite combinations and therefore a poor climate for these two industries.

The 1975 employment projections have been subjected to a differential shift analysis which compares the District with the Nation and with the Middle Atlantic States. In making the comparison between the District and the Nation, the first important revelation is that the District's industries will not equal national rates of growth. If performance expectations for the Turnpike District were the same as those for the Nation between 1965 and 1975, total wage and salary employment would increase by 29,370 instead of the 16,800 projected. Thus, there would be a downward shift of 12,570.

CHART 12
COMPONENTS OF EMPLOYMENT CHANGE TURNPIKE DISTRICT 1965 TO 1975



Source: Pennsylvania State Planning Board

This poor performance is attributable to both competitive disadvantages and an unfavorable mix of industries. Fifty-five percent of the downward shift (or net relative change) is explained by the District's inability to compete successfully with other sections of the Nation, and 45 percent is the result of an unfavorable mix of industries.

Of these two economic elements - competition and industrial mix - it is generally agreed that there can be more local influence over the competitive stature of an area than in making quick changes in the industrial mix. Accordingly, the competitive posture of the Turnpike District was analyzed not alone as it relates to the Nation, but also as it relates to the Middle Atlantic States - the area with which it generally experiences the greatest competition. That comparison shows that the Middle Atlantic States are competitively worse off than the District. Were the District to perform between 1965 and 1975 as is forecast for the Middle Atlantic States, it would have a downward competitive shift of 11,510 jobs instead of the 6,860 downward shift projected.

The analysis further reveals that the District appears to have a significant competitive advantage over the Middle Atlantic States in apparel (+1,790 jobs), agriculture (+1,370), retail and wholesale trade (+1,330), and contract construction (+1,290). By contrast, the District is not expected to compete effectively with the Middle Atlantic States in such major industries as government (-1,650 jobs), services (-1,510), and transportation, communication, and public utilities (-1,260).

This comparison of the Turnpike District with the Middle Atlantic States is helpful to local officials interested in understanding the District's relationship with surrounding areas, but predicted generally better performance of the District is no basis for complacency. The Middle Atlantic States will lose shares of employment to the rest of the Nation in almost all industrial sectors so that the Turnpike District can look good in comparison by simply losing shares less rapidly.

That other element of the District economy - the industrial mix effect - is the sum of individual industry growth rates less the average national growth rate. A quick glance at the industrial mix effect column in the table in the Appendix discloses many negatives which automatically indicate that the industries are either slow-growth or declining. Unfortunately, many of these are large employment sectors in the Turnpike District and therefore contribute to the 5,710 downward shift. Major industries contributing to this unfavorable industrial mix are agriculture (-3,480 jobs), primary metals (-2,510), transportation, communication, and public utilities (-2,110), mining (-2,100), and retail and wholesale trade (-1,400).

Local districts cannot change national growth rates for industries - rates that result from complex economic and technological conditions - so they are well advised to seek those industries where growth is expected. By 1965, only 40 percent of the Turnpike District jobs were in rapid growth industries. Forty-six percent were in slow-growth industries, and the remaining 14 percent were in declining industries.

Viewed in terms of the District's leading sources of employment in 1975 (those industries with 5,000 or more employees), it is clear that only services and government, among the Nation's rapid growth industries, are important locally.

The following table shows, however, that even in these two industries the District's projected employment trends will be below the average for the Middle Atlantic States. The analogy that seems appropriate here is a comparison of vehicles moving at different rates of speed. In the case of services and government, one may think of fast-moving vehicles nationally which are expected to move slower in the Turnpike District. In a slow growth sector such as apparel, the vehicle is moving slowly nationally but may be moving slightly faster in the Turnpike District. The declining industries could be represented by vehicles moving in reverse nationally, but going slower in reverse (or even forward) locally if they are performing at above national average rates.

TABLE 29

TURNPIKE DISTRICT INDUSTRIES EMPLOYING 5,000 OR MORE IN 1975

Industry	1975 Employment	National Growth Characteristic	District Performance Expectation 1965-1975 Relative to Mid-Atlantic	United States
Trade	25,200	slow growth	above average	below average
Services	22,800	rapid growth	below average	below average
Government	25,200	rapid growth	below average	below average
Transportation, Communications, Public Utilities	15,300	slow growth	below average	below average
Primary Metals	13,800	slow growth	above average	below average
Apparel	8,900	slow growth	above average	above average
Agriculture	5,400	declining	above average	above average

Source: Pennsylvania State Planning Board.

Clearly a District development strategy must be based on some efforts to obtain additional employment in industries with national rapid growth expectations. This will involve competition with other Middle Atlantic states. Hence, the District should seek to maintain its projected competitive advantages in contract construction; finance, insurance, and real estate; paper products; rubber and plastics; fabricated metals; electrical machinery; and instruments. At the same time, it should seek to increase its competitive advantage in services, government, chemicals, non-electrical machinery, and transportation equipment.

PROBLEMS

The 1975 employment projections for the Turnpike District may be conservative, although when compared with the 1960-1965 period, they reflect a faster growth rate than existed then. Perhaps even more important is the fact that officials who have commented on the projections generally agree that they are "realistic." Even if they are realistic, realization of them would not represent a particularly great achievement.

People would still be leaving the District, or be remaining without employment. There would still be a concentration of slow growth industries and considerable dependence on steel and railroading. Extractive industries such as coal, stone, clay, and glass would continue to rank among the District's important sources of manufacturing employment.

Clearly, the District's leaders are trying to diversify the economic base of the area, but to accomplish this feat (as indeed the leaders in Blair County have done to a large extent over the past decade), many different obstacles must be overcome. Problems such as manpower training, transportation access, industrial site development, and utilities and public facilities construction must be dealt with. Leaders in the Turnpike Local Development District have listed the problems and deficiencies which they feel hamper development. These are the obstacles to achieving greater economic growth than is now projected for 1975:

1. Restrictive and limited transportation ingress and egress impede the economic development of the District;
2. Formal education level for the District is lower than State and National levels;
3. Unemployment rate is a minimum of 55% higher than State and National levels;

4. Underemployment is chronic due to low skill levels;
5. Lack of development industrially;
6. Inadequate health facilities and services;
7. Water pollution and flood control problems;
8. Inadequate sewage facilities;
9. Lack of local funds;
10. Household incomes are below State and national levels at a minimum of 20%;
11. Underdeveloped tourism and recreational potentials;
12. Limited attitudes regarding District's economic and social problems;
13. Outward migration of the productive segments of the District's population is a minimum of 400% higher than State and national levels;
14. Housing facilities are considerably lower than State and national norms.

Of the several facts that emerge from this locally prepared list of problems and deficiencies, one is that social development is tied directly to economic development in the minds of Turnpike District officials. Although no attempt was made to rank the urgency of these problems, it is noteworthy that formal education, local attitudes, and housing were given importance just as unemployment, low skill levels, and industrial development were emphasized. And the infrastructure of public facilities and services needed in contemporary industrial America - highways, housing facilities, health services - were placed alongside these other requirements. Thus, the conviction emerges that the Turnpike District has to proceed on many fronts simultaneously to be successful, and conversely, that no single program, no panacea, exists for the complicated problems the District currently faces.

Accordingly, District leaders have developed goals which positively formulate directions for programs to take to overcome local problems. These goals are:

A. Improve major road systems linking Economic Activity Areas within the District and with other regions;

B. Expand vocational-educational facilities and higher educational facilities;

C. Create a diversified manufacturing base;

D. Increase per capita level of income through increased productivity;

E. Improve housing and residential environments;

F. Expand and improve health facilities;

G. Develop recreation and tourism;

H. Achieve mine area restoration and land stabilization;

I. Develop constructive attitudes toward broad-based socio-economic problems.

As these goals indicate, social and economic development depend on the District's ability to train its manpower, intelligently use its natural resources, and construct needed public facilities which support economic activity. By the painstaking process of examining what exists and measuring that against need, the magnitude of the local effort required to step up the rates of economic growth becomes apparent.

MANPOWER

Concern about manpower can be read into items 2, 3 and 4 in the District lists of problems and deficiencies. Low levels of educational achievement, high unemployment rates, and a low proportion of skilled workers are all indications that the District's people are failing to realize much of its potential.

To some extent, the blame for this under-development of the District's people may be assigned to the industrial needs of an era now past, an era when mining, railroading, and agriculture demanded more muscle than brains. Today, of course, employers require brains and education over brawn, so that many poorly trained workers find themselves excluded from many job openings.

The District's recent history is instructive: between 1950 and 1960, some 15,500 mining jobs were lost in Cambria and Somerset Counties; 10,000 railroading jobs were lost in Blair County; 2,400 farming jobs disappeared in the two counties. These are not typically jobs with skills that are easily transferred to another line of work, so the Turnpike District found itself in the fifties and early sixties with unemployed people with obsolete skills.

During this period, worker training was left largely to private institutions except for shop, business, and home economics courses in high schools. By 1965, the District's facilities consisted of three private schools teaching trades with enrollments of 446 students. In addition, 6 institutions (4 private and 2 public) were training 570 nurses.

Two major educational facilities are now under construction. The Greater Johnstown Area Vocational-Technical School (cost about $10 million) is to open in September, 1969, with a capacity of 1,500 students. And the Altoona Area Vocational-Technical School (cost about $7 million) is scheduled to open at the same date with a pupil capacity of 1,470. Both of these projects have received grants from the Appalachian Regional Commission.

While these two schools fill the most crucial needs since they are centered in the areas with the largest populations, there is widespread concern in the Turnpike Local Development District that similar educational advantages be extended to some of the smaller economic activity areas. Among the areas where local leaders have expressed a desire for vocational-technical training facilities are Ebensburg, Somerset, Huntingdon, Bedford-Everett, and Barnesboro-Spangler. A vocational-technical school to serve northern Cambria County is now in the planning stage.

Thus, there is widespread concern throughout the Turnpike District that it not be caught again with willing workers lacking employable skills. This concern does not stop with technical and vocational education, however. Equally obvious has been the District's determination to have students get college educations.

St. Francis College at Loretto (1,465 students in 1965), Juniata College at Huntingdon (1,010), and Mount Aloysius Junior College (418 girls), have been the District's colleges until recent years when the Pennsylvania State University developed its largest off-campus center in Altoona (1,674 full and part-time students) and the University of Pittsburgh opened a similar off-campus center in Johnstown serving 1,500 students. Each institution is primarily a two-year facility with provisions for transfer to the school's central campus for the last two years.

Substantial plans are in progress for expanding the existing facilities of these schools. In Altoona, the Penn State center is constructing a multi-purpose building to be completed by 1969 that will enable the school to handle 700 more students. School officials report that the long-range campus development plan includes five more buildings.

In Johnstown, the University of Pittsburgh center also is expanding with the aid of a $450,000 Appalachian Regional Commission grant for two general-purpose classroom and laboratory buildings.

Juniata College is involved in a major expansion program estimated to cost $5.1 million that will include a college center ($2 million), residence halls ($500,000), and other buildings.

District officials suggest a study of higher education needs in the Bedford-Everett economic activity area.

The benefits of college education for students are easily demonstrated in dollars and cents, but this is only part of the reason for wishing to have college facilities established in the Turnpike District. Another consideration is most significant - the fact that colleges become the center of cultural activities in a community. More and more development officials find that such facilities are important in attracting and holding leaders and well-educated people who have the option of living in many different parts of the Nation. In sum, colleges help communities of Appalachia stop the brain drain and hold leaders who may help solve area problems.

NATURAL RESOURCES

Natural resources are an important ingredient an area has to spur its development. In the Turnpike District, iron ore played a key role in the development of Johnstown and its environs but long ago declined in importance. For more than fifty years, bituminous coal has been the leader in mineral production, forestry has continued important to certain key industries, and farming has been of modest importance. The District's abundant water supplies have suffered from past abuses which local officials are today attempting to correct.

Cambria and Somerset are the District's two major coal mining counties. Together they produced 15.5 percent of total Pennsylvania bituminous coal in 1966. Production from Cambria - 8.1 million tons - ranked it third among the State's counties while the 4.1 million tons from Somerset gave it sixth rank. In Bedford, Blair, and Huntingdon Counties mining - mostly strip mining - is much less important. In all there were 246 mines operating in the District - some quite small and others large and automated such as the Slope Mine 33 of Bethlehem Mines Corporation near Ebensburg.

During the 1950-1965 period, mining employment declined from 20,600 to 5,100 and caused a shock of economic dislocation throughout much of Cambria and Somerset Counties. Production fell off during this period as railroads, home owners, and many industrial users turned from coal as a fuel source. Since the early sixties, the downward trend has been arrested. In the Barnesboro-Spangler area, there is general optimism that mining production will continue to rise as a result of greatly increased coal consumption by electric utilities.

Two developments that contribute to this optimism are the unit-train and mine-mouth electric power generation. The unit-train is simply an entire train of coal hopper cars which are loaded as the train moves slowly under a chute (about two minutes per car) and delivered to one customer at a much lower freight rate than prevails when coal cars are moved in mixed freight trains. Mine-mouth electric power generation facilities are located near coal mines; electricity rather than coal is transmitted to the users. Three such plants at New Florence, Shelocta, and Homer City will consume an estimated 10.4 million tons of coal annually after the third one is put into operation in 1971.

Thus, the optimism for expanding production from the District's coal mines appears well-founded. Conveyor systems and continuous mining machines are being installed so that the great demand of mining companies today is for machine operators and mechanics.

The mines of Cambria and Somerset Counties have contributed to considerable stream pollution by mine acid discharges. Over 54.3 million gallons of acid water per day are estimated to pour into the streams of Cambria and Somerset Counties. The Conemaugh and Casselman Rivers and Clearfield and Quemahoning Creeks have been identified by State officials as suffering most.

In the Pennsylvania State Supplement, Appalachian Water Resources Plan, mine drainage abatement on the Casselman River (to precede construction of a reservoir) was recommended as one of seventeen priority projects of the State.

Within the District, private coal companies are moving to curb pollution by building treatment plants. One such experimental plant reportedly converts 1.7 million gallons of acid water to a non-acid state daily, and two similar plants have been announced.

About 16,600 acres of strip mined land in the Turnpike District have not been restored. Over half of this total is in Somerset County, and an additional 5,000 acres are in Cambria County. All of the District's counties have been affected, however - Huntingdon 900 acres, Bedford 700 acres, Blair 900 acres, and Fulton 400 acres. Restoring the land to original contours and plant-

TABLE 30

1966 VALUE OF MINERAL PRODUCTION IN THE TURNPIKE DISTRICT

County	Value	*Minerals Produced in Order of Value
Bedford	withheld	Stone, coal, lime, sand and gravel
Blair	withheld	Stone, coal, clays
Cambria	withheld	Coal, clays, stone, iron ore
Fulton	withheld	Stone, sand and gravel
Huntingdon	withheld	Sand and gravel, stone, coal, clays
Somerset	$19.4 million	Coal, clays, stone, sand and gravel
Total	$76.8 million	

*Excludes value of natural gas, natural gasoline, LP gases, petroleum, and gem stones.

Source: Pennsylvania Department of Internal Affairs, Topographic and Geologic Survey.

ing some form of ground cover are needed in much of this area. Public help is hampered, however, because most of the land is still privately owned and therefore not eligible for the expenditure of public funds to accomplish the restoration.

Similar to this spoiled land scattered through the District are the culm piles at some of the old mines in the District. The Ebensburg economic activity area is particularly plagued by them - some piles are more than fifty years old.

Other minerals are produced in the District, as the table above illustrates. Not shown is the fact that Huntingdon County is sixth in the State in sand and gravel production.

TABLE 31

TURNPIKE DISTRICT FOREST LAND IN 1965

County	Commercial Forest (acres)	Percent Of Total Land Area
Bedford	432,800	67
Blair	220,000	65
Cambria	278,300	63
Fulton	187,600	67
Huntingdon	406,700	71
Somerset	437,100	63
District Total	1,962,500	67

Source: Pennsylvania Department of Commerce.

The District's forests are an important resource. Commercial forests cover about two-thirds of the 2.9 million acres of the District and support about 223 sawmills found throughout rural sections. There are three paper mills - all in Blair County - and wood using industries such as semifabricators of hardwood furniture, laminated wood products, and particleboard. The table above shows the acreage and proportion of total land in commercial forest in 1965.

These figures can create a false impression of abundance when viewed in isolation. The report, Pennsylvania Forest Industry Statistics (1967) reveals that the supply of sawtimber appears to be building up only in Blair County. In Cambria, Somerset, and Bedford Counties, there is already a deficit and that deficit is increasing. In Huntingdon and Fulton Counties, the surplus of sawtimber that has built up over the past is decreasing.

Since sawmills are the District's major wood using industries, this overcutting of forests eventually could cause a decline in that industry.

No figures are available on the balance trends for pole timber, although moderate cutting exists throughout the District. All of its counties except Somerset are in the 15 to 50 million cord class while Somerset had 63.5 million cords cut from it in 1964. Depending on the size cut, the predominant hardwood poletimber of the District is used for pulpwood, fuel and firewood, mine timbers, and fence posts. Softwood poletimber can also go to these uses, but where sizes are large enough a preferred use is for utility poles.

Farming in the Turnpike District is another use of the area's natural resources which accounted for $57.7 million in receipts in 1966. Almost one third of this total was received in Somerset County where dairy farming was responsible for $13 million in receipts. Despite the presence of some outstanding farms, the District is not a leading agricultural area. Indeed, it has suffered declines in farming like other sections of Appalachia - 2,400 farmers lost between 1950 and 1965. Some observers suggest that this loss is small in comparison with other areas, and that the reason it is small is that agriculture was not as important here as elsewhere. Put in another way, large losses of agricultural jobs have been notable where mechanization could be introduced to create profitable conditions, and where farms could be consolidated into larger and more efficient units.

Farm consolidation is revealed by the growing average size of farms in the District. Between 1950 and 1964, the average increased from 123.4 to 166.1 acres. During this same period, there was substantial abandonment of farming on marginal lands: 338,000 acres - 22.2 percent of the 1950 total - were taken out of farming. A natural result of these changes was an increase in the number of part-time farmers. Between 1950 and 1959, the number increased by 1,100 and the proportion of part-time farmers among total farmers in the District jumped from 16.1 percent to 43.6 percent.

TRANSPORTATION

The agricultural, forestry, mining, and industrial heritage of the Turnpike District is apparent in the public facilities that have been developed to serve these needs. Nowhere is this past more apparent than in the District's transportation facilities. The short era between 1830 and 1860 in which the main line of the Pennsylvania Canal was the District's most important transportation artery left an imprint apparent even today.

The main line of the Pennsylvania (now the Penn Central) Railroad follows much the same route through the District's larger economic activity areas - Huntingdon, Tyrone, Altoona, Johnstown - and highway route U. S. 22 also parallels the old canal bed through much of the District. Several other railroads, including the B & O, Stonycreek, Conemaugh & Blacklick, and Cambria and Indiana, have lines into mining sections and important logging centers. The State highways and township roads follow the routes of the earliest roads linking farming and mining communities with the District's larger cities. The major exception to this rule is the Pennsylvania Turnpike which crosses Fulton, Bedford, and Somerset Counties in the southern part of the District following the right-of-way of William K. Vanderbilt's projected South Penn Railroad that never was completed. Of super highway design, it carries east-west traffic on a route that bypasses the District's large economic activity areas.

HIGHWAYS

District leaders consider that highways have the highest priority among public facilities needing improvement. They see improvements to routes U. S. 219, U. S. 220, U. S. 522, U. S. 22, and U. S. 30 as the keys to rapid economic and social development.

U. S. 219 is Corridor N of the Appalachian Development Highway system and runs north from the Maryland state line through Somerset and Cambria Counties to U. S. 22 near Ebensburg. North of route U. S. 22 it is not part of the system. The section of U. S. 219 from Johnstown to Ebensburg is completed. From Johnstown south to Somerset improvements are programmed, while south of Somerset the route is only partially programmed.

There is little doubt in local officials' minds as to the importance of this road. It is ranked at the top among projects important to Johnstown and Somerset. The new highway will provide a needed by-pass around Somerset and generally will open parts of Cambria and Somerset Counties to industrial and residential development.

Leaders in the Barnesboro-Spangler area are equally convinced of the importance of an improved route U. S. 219 to the economy of that activity area.

U. S. 220 is Corridor O of the Appalachian Development Highway system from the Maryland state line through the District to the Keystone Shortway near Milesburg. This route also is known as the "Appalachian Thruway." Parts of Corridor O are now programmed around Bedford, Altoona, and Tyrone.

U. S. 22, the east-west highway that passes about four miles south of Altoona and ten miles north of Johnstown, is Corridor M of the Appalachian Development Highway system. This route is now programmed for construction between Ebensburg and Hollidaysburg.

Two additional routes are mentioned as needing improvements to meet industrial expansion that is occurring - U. S. 30 and U. S. 522. Development officials in the Bedford-Everett economic activity area place the improvement of U. S. 30 at the top of their needs and cite that area's importance as a location for trucking and warehousing depots in support of this project. In a similar vein, officials in the Huntingdon economic activity area point to the importance of U. S. 522, a north-south route which has become congested as industrial and residential development has expanded along it. This route has been programmed for improvement from Mount Union south to the Turnpike during the 1967-1973 period.

District leaders believe that major highway improvements will:

1. Increase industrial activity by encouraging and expediting truck traffic to and from the area which will aid the expansion of existing industries as well as entice new industries to the area;
2. Stimulate tourism by making recreational facilities more accessible to both interstate and intrastate visitors;
3. Expand the development of all types of service industries which are playing an ever increasing role each year in the national economic structure;
4. Effect greater utilization of the District's school system at all levels by

making schools safely accessible in reduced travel time. Conversely, regional vocational-technical schools, secondary schools, and institutions of higher learning will be able to serve wider geographic areas and a greater percentage of the populace;

5. Strengthen the position of community airports since the success of a typical airport is dependent upon its rapid accessability to the area which it serves;
6. Provide more job opportunities for the populace of the District through overall economic expansion.

District leaders have assigned second priority to the construction of vocational-technical schools (discussed in the section on manpower), and third ranking to site development.

In no case, however, is it proper to conclude that all of the facilities proposed under one category are to be completed before moving to the next. Indeed, most development officials despair of arriving at a satisfactory means of determining on systematic and rational grounds whether road "x" should be funded before vocational-technical school "y" or industrial site "z". Rather, they find it necessary to speak in terms of highest and lowest priorities with a determination to emphasize those with highest priority whenever possible. In all cases, they insist on maintaining the connection between projects and development objectives.

SITE DEVELOPMENT

Site development for industrial, tourist, and other economic activities is, of course, at the core of most development efforts. Access roads can be financed in part by grants approved by the Appalachian Regional Commission, while water and sewer lines can be financed in part by grants approved by the Pennsylvania Department of Commerce under its Site Development Program.

In the Johnstown economic activity area, the Greater Johnstown Chamber of Commerce has established a 265-acre industrial park in Richland Township for which it received a $136,150 grant from the Appalachian Regional Commission for an access road. Industrial diversification is a continuing program that receives high priority from Johnstown development officials.

In Blair County, Altoona Enterprises, Inc. (a creature of the Chamber of Commerce) has helped locate and expand 45 industries in the Altoona economic activity area in the past five years, adding some $50 million in annual payrolls to the area. Currently the group is seeking industrial sites in the Tipton area, but plans are not far enough along to determine what costs will be incurred.

In Somerset, the 200-acre Somerset County Industrial Park has received a $41,370 Appalachian Program grant toward construction of an access road. The site is close to the Turnpike and therefore considered to have high potential for successful development.

In the Barnesboro-Spangler area, the Hastings industrial development group is developing a 50-acre industrial park at Hastings for which it has applied to the Department of Commerce for a site development grant.

The Bedford Development Council has brought in nine industries and the Everett Area Industrial Development Corporation has been involved in similar efforts. A key component of these efforts includes acquiring sites which can be made available to industries as an inducement to their locating there. Leaders note that a lack of suitable sites with water and sewer facilities hinders these efforts. Accordingly, sewage facilities for industrial sites were given a high priority rating in the Bedford-Everett economic activity area.

As noted in the description of the Bedford-Everett area, expenditures for development already amount to $13 per person - an amount that has strained the ability of the area's residents to sponsor additional improvements. The

Bedford Development Council currently has a 65-acre tract optioned for industrial development, but is unable to finance many desirable improvements without State and Federal help.

HOUSING IMPROVEMENT

District-wide, fourth priority is given to improvement of housing conditions, although there is considerable variations among economic activity areas in the priority ranking of housing. In the Broadtop-Saxton area, housing is ranked second in importance among needs, the same ranking given in Johnstown and the Confluence-Ursina area. In Barnesboro-Spangler and Huntingdon, it is given third rank, and in Altoona, fourth.

Despite these high rankings, specific projects have not been proposed by District development officials. Housing development generally has been left to private developers and has not been the province of local development officials. A notable exception is the fact that 20 new homes are being constructed at the Hastings Industrial Park by the Hastings industrial development group.

One survey reported that in Altoona, where 29 percent of the housing units were deteriorated or dilapidated in 1960, there is widespread local opinion that poor housing is a major deterrent to growth. In Johnstown, 24 percent of the housing was reported to be substandard in 1960, and subsequent reports indicate that there are areas with homes lacking running water and interior plumbing. Elsewhere, statistical reports are lacking although there is much sentiment that "deplorable" and "blighted" housing is widespread throughout the District.

Housing market analyses have been conducted in both Johnstown and Altoona by the Federal Housing Administration, and since these cities meet other requirements established by the Appalachian Regional Commission, they are now eligible areas for housing assistance loans and grants. These loans and grants can cover up to 80 percent of the expenses of planning and of obtaining an insured mortgage for a housing construction or rehabilitation project incurred by non-profit groups sponsoring low and moderate income family housing under Section 221 of the National Housing Act.

Aside from public housing efforts to date, the District's communities have relied largely on private efforts which of necessity have not been part of any overall strategy. Indeed, there is a wide gulf between asserted need and specification of those needs as to size, cost, and location of housing except for the findings of the FHA market analyses. With the high priority and considerable emphasis given to housing by local development officials, they will probably develop concrete goals and proposals to overcome this common deficiency in the District.

SEWAGE COLLECTION AND TREATMENT FACILITIES

The sewage treatment plants for each of the counties of the Turnpike District were inventoried by the Appalachian Regional Commission in 1965. The totals by county are: Bedford-6, Blair-8, Cambria-7, Huntingdon-2, Fulton-0, and Somerset-5. In both Altoona and Johnstown, there are two plants serving the needs of the city.

Sewage collection and treatment facilities are being upgraded because of rising standards that are being established by the State Sanitary Water Board, and new facilities are being demanded to serve new development and to protect streams from further pollution.

Recent developments in the District include a multi-million dollar expansion of sewage facilities in Ebensburg, creation of a Windber Sewer Authority (which has an engineering study underway for a $1.25 million extension of lines), establishment of the Central Blair County Sanitary Sewer Authority to construct an outfall sewer and treatment plant to serve growing industrial and residential areas, appointment of a Bedford County Planning Commission to study water and sewer problems, study of sewage needs in the Saxton area, and creation of a Confluence-Ursina Sewerage Authority.

Generally, the District's program priority for sewage facilities is fifth rank, but here again local areas give the subject varying emphasis. In McConnellsburg and Confluence-Ursina, sewage facilities are given top priority, in Bedford-Everett fourth priority, and in Altoona fifth. In still other areas no rank is given although needs are cited. A several million dollar system is needed in the Barnesboro-Spangler area, and at Hyndman in southern Bedford County both a new water and new sewage system are needed. A sewage system is needed at Garrett in central Somerset County; it is estimated to cost $300,000.

The impact of such facilities on development is suggested in the Bedford-Everett area where industrial sites around Bedford are operating with temporary sewage treatment facilities. Local leaders want to extend the Bedford sewer system to provide permanent facilities. Commercial development at both the Bedford and Breezewood interchanges of the Pennsylvania Turnpike is inhibited by the lack of sewage treatment facilities; three new commercial establishments have not been able to build at these locations.

The top priority given sewage facilities in Confluence is in part influenced by the fact that the Borough has been cited by the Pennsylvania Sanitary Water Board for stream contamination and ordered to abate the pollution. This pollution flows into the Youghiogheny River which is being developed for recreation uses at the Ohiopyle State Park. Sewage facilities also are needed to serve industrial and tourist development sites.

In McConnellsburg, a sewage treatment plant will be constructed with the financial assistance provided by a recently-approved grant from the Appalachian Regional Commission. This facility must be constructed before development efforts can be effective.

Trunk line sewer extensions are needed to serve growing residential and industrial areas around Huntingdon.

A sewer system for Shade Township and Central City Borough, on the southern edge of the Johnstown economic activity area, is in the discussion stage.

Development officials who evaluate sewage collection system and treatment plant project proposals generally limit themselves to a few considerations. Need is usually apparent. The availability of State and Federal funds can help in project financing. A fundamental consideration is whether the facilities will have a multiplier effect and induce a chain reaction of economic improvements. Thus, community leaders and development officials are well advised to examine the linkage between the construction of a project and residential, commercial, industrial, or recreational developments. Demonstrating these connections and showing how projects can encourage tourism as in the case of Confluence or industrial development as at Bedford are necessary parts of development strategy, and they provide a basis for evaluating the relative importance of project proposals.

HEALTH FACILITIES

In the Turnpike District there are 17 general care hospitals with 2,564 beds. There are 28 nursing and convalescent homes, 4 mental health hospitals, and 7 other mental health facilities. Three of the mental health hospitals are owned and operated by the State and the fourth by Clinic in Johnstown, Inc.

The general care hospitals are located in Everett, Altoona (3), Roaring Springs, Tyrone, Colver, Johnstown (4), Spangler, McConnellsburg, Huntingdon, Meyersdale, Somerset, and Windber.

The improvement of Mercy Hospital in Johnstown has been proposed (a fund-raising drive is now underway) and the Appalachian Regional Commission recently approved a grant for the Lee Hospital diagnostic and treatment center.

In Meyersdale, the Community Hospital has planned an addition to cost about $600,000. Locally, this project is given the community's highest priority.

In the Bedford-Everett area, the present 88-bed Memorial Hospital of Bedford County is deemed inadequate. Two Hill-Burton program grants from the Federal government have had to be rejected because of insufficient local matching funds. (This is the area where $13 per person has been expended on development efforts.)

A long-term appraisal is being made in Huntingdon County where the trustees of Blair Hospital and the Huntingdon County Commissioners have jointly engaged a management consulting firm to prepare a master plan for all county health facilities. Despite the fact that all projects await the findings of the consultants, the Huntingdon economic activity area gives fifth rank to hospital improvements.

TOURIST AND RECREATION

In economic terms, tourist development seldom provides a sustained livelihood, nor does it have the multiplier effect of payrolls from manufacturing industries. It is not a basic industry in that sense. In a larger sense, neither is recreation a form of economic activity; rather it is made up of many social, physical, and educational activities which are pleasant and attractive to people. Thus, tourist promotion goals, while economic in motive, appeal to non-economic interests of the public and seek to enrich the lives of people they attract.

In the Turnpike District, the range of tourist attractions is extensive; many are privately operated. Among the publicly owned facilities are ten state parks and eleven state forest picnic areas. Two new state parks are proposed - Canoe Creek in Blair County and Laurel Ridge in Cambria and Somerset Counties.

Several important additions to the area's recreation facilities are proposed by Federal, State, and local officials. Among them are:

*Raystown Dam National Recreation Area, a 40,000-acre area surrounding the proposed 8,000-acre Raystown Reservoir in Huntingdon County. Originally scheduled for the beginning of construction in 1968, this project has been delayed by Congress. Within five years of completion, the Recreation Area is expected to attract 1,900,000 visitors from the District, the East Coast, and the Midwest. This project was listed as fourth among objectives in the Huntingdon economic area, the section of the District which is expected to enjoy the greatest economic return.

*Naturealm Conservation-Education Area in Prince Gallitzin State Park. This development is planned to show animals in their natural habitat and create an environment where students can study nature and conservation. It would include a large preserve and cost approximately $9,500,000. Several hundred jobs at the park would result while at least 1,000 additional new jobs would derive from private investments stimulated by the Naturealm Development. Lying in the Barnesboro-Spangler economic activity area, it would bring to the local economy a needed source of new jobs. This project was one of 17 top priority projects recommended by the State of Pennsylvania in the Pennsylvania State Water Resources Supplement submitted to the Appalachian Regional Commission and the U. S. Corps of Engineers in February, 1968.

*Meadowgrounds Project in Fulton County. This area is a 204-acre lake of the Pennsylvania Fish Commission surrounded by land owned by the Pennsylvania Game Commission. Local leaders propose that the lake and land be transferred to the State Department of Forests and Waters for use as a state park. This proposal is given second priority in the McConnellsburg economic activity area, an area where leaders are emphasizing tourism.

*Stony Creek Watershed Project in Somerset County. This five-dam flood control and recreation project would provide 870 acres of water surface including opportunities for boating, swimming, fishing, and similar water sports. An analysis of the proposal made by Department of Agriculture officials indicates that 150,000 people would visit the project annually. This project was one of the 17 top priority projects recommended in the Pennsylvania State Water Resources Supplement.

*Upper Casselman River Reservoir in Somerset County. The Pennsylvania State Water Resources Supplement recommended this project for additional study since it has considerable potential for recreational development if acid mine water pollution is abated before the reservoir is constructed.

MINE AREA RESTORATION

Past mining activities in the Turnpike District have caused strip mining scars, culm piles, and acid mine water pollution. Their blighting effect is a deterrent to growth.

At Revloc, near Ebensburg, a culm pile is preventing the expansion of residential and industrial areas. The elimination of culm banks in this area is given second priority by local officials among their development needs.

A strip mine restoration project is now being developed for the Bellwood reservoir and watershed area in Blair County. The Benscreek strip mine restoration project near Johnstown would create 32 acres of industrial land.

Another condition in the Turnpike District which results from bituminous coal mining is acid mine water pollution of the Casselman River and its tributaries in southern Somerset County. The Pennsylvania State Water Resources Supplement recommended the abatement of mine drainage to restore fish and other aquatic life.

FLOOD CONTROL

Mention of the Casselman River project in connection with mine restoration measures suggests the multiple-purpose character of that proposal when it is recalled that the Upper Casselman River Reservoir is also considered to have a distinct recreational character. Location and engineering studies have been proposed for the Upper Casselman River to plan a reservoir that will have low flow augmentation and flood control features in addition to conservation and recreation aspects.

Similarly, many of the District's flood control projects have already been mentioned in some other connection. The Raystown Dam will provide flood control on the Raystown Branch of the Juniata River.

The Stony Creek Watershed Project, also mentioned in connection with recreation developments, will control 124 miles of watershed in Somerset and Cambria Counties south of Johnstown and will protect several small communities which have been flooded in the past.

Not previously mentioned is the Sam's Run Flood Protection Project in the Johnstown economic activity area. This, too, was one of the 17 top priority projects recommended in the Pennsylvania State Water Resources Supplement. The project consists of enlargement and repair to the channel of Sam's Run to protect residential and industrial areas.

Several other communities in the Turnpike District are identified as having a continuing major flood potential. Among them are Johnstown, where major flood control structures have been built but others are needed to protect industrial, commercial, and residential areas.

In Meyersdale in southern Somerset County, there is also a serious flood potential. A flood control project is now in the engineering stage of development with construction to begin when funds become available.

AIRPORTS

There are five public and twenty-one private airports throughout the Turnpike District. Only two - the Altoona-Blair County and Johnstown-Cambria County - airports have regularly scheduled passenger service.

In 1965, the Altoona-Blair County airport at Martinsburg served nearly 10,000 passengers. According to the Airport Plan of the Pennsylvania Aeronautics Commission, this airport needs an improved runway, obstruction removal, and additional land for future airport facilities. These modifications were given 6th priority among the needs of the Altoona economic activity area.

The Johnstown-Cambria County airport is the 5th largest in Pennsylvania in the number of passengers served - over 21,000 in 1967. The only improvement cited in the Pennsylvania Airport Plan is a runway extension.

Elsewhere, there is a private airport in the Bedford-Everett area with a 2,300 foot asphalt runway. The airport is now inadequate and industrial and tourist expansion in the area will create even greater demands for better airport facilities. The Pennsylvania Airport Plan calls for a new airport on a new site in Bedford County.

The Airport Plan indicates that more land and improved runways are needed at the Ebensburg Airport to serve local needs.

To the north in the Barnesboro-Spangler economic activity area there are several small, private airports. The Airport Plan proposes a new airport that should be built near Patton and Prince Gallitzin State Park.

At Huntingdon, local business and civic leaders have proposed the improvement of the Huntingdon Airport in conjunction with an industrial park area. The Airport Plan proposes a new airport near Huntingdon as well as development of air facilities in the Mount Union area.

In Somerset, the County airport is commercially licensed and serves the Somerset economic activity area for unscheduled flights. In 1967, the Appalachian Regional Commission awarded a $22,875 grant to assist in financing runway and lighting improvements with a total cost of $109,500. These were improvements thought to be helpful to the area's efforts to attract new business and industry.

WATER SUPPLY AND DISTRIBUTION

Most of the District's communities are served by public and private water supply and distribution systems. However, around Somerset, new residential and industrial development has resulted in requests for extensions of both the water and sewer lines, causing borough authorities to commission a feasibility study of needed improvements. In the Bedford-Everett area, expanded water distribution facilities are needed at the Bedford and Breezewood interchanges of the Turnpike. Around Barnesboro-Spangler, water distribution system improvements are needed, and the Hastings Area Industrial Development Association has requested a grant to help construct a water line into the Hastings Industrial Park. Elsewhere, smaller communities, many of them former mining towns, are reported to have insufficient or contaminated supplies.

At Hyndman in Bedford County, an adequate water supply system is needed. Broad Top City in southern Huntingdon County has applied to the U. S.

Department of Commerce for a $31,250 grant to help in the construction of a proposed water distribution system estimated to cost $125,000. And Meyersdale in southern Somerset County is seeking funds to expand the Borough's existing system.

A $2,980,000 water facilities development program is being planned for Altoona.

Near Johnstown, at least four water system projects are in progress; Conemaugh Township, where the local water authority has a $110,000 system planned; Jennerstown Borough, where a $200,000 project has reached the engineering stage; Boswell Borough, where the Water Authority has reached final engineering design; and Paint Township, which has recently commissioned a feasibility study for water distribution lines.

LIBRARIES

There are 29 libraries with approximately 407,000 volumes in the Turnpike District. Of these, the largest is the main library in Johnstown of the Cambria County Library system. A new main building is being planned for construction in an urban renewal area.

New libraries facilities are being constructed in Altoona where a $490,000 grant from the Appalachian Regional Commission toward the $1.4 million project was a substantial help, and in Huntingdon where a $58,800 Appalachian grant is making possible the $196,000 expansion of that facility.

Through the Pennsylvania Department of Public Instruction, the Commonwealth gives State aid to libraries if they meet certain requirements as to space, holdings, staff, and salaries. Only Blair and Cambria Counties in the Turnpike District meet these standards and receive this State aid.

The extent to which the other four counties should concentrate on meeting these State standards will be influenced by the degree libraries seem important to other development objectives. Libraries may be thought important to a community's ability to attract managerial personnel of industrial prospects and to meet expanding technical and educational needs of the population.

TURNPIKE DISTRICT PROGRAM PRIORITIES

An analysis of the many District needs by Turnpike Local Development District officials has isolated the programs which seem to have the greatest bearing on continuing development. The factor of need, while always a leading consideration, was considered alongside the anticipated multiplier effects a program might have on the local economy, and where some connection with job development or other economic encouragement was evident, the program's merits were enhanced.

The following overall District program priorities have been recommended by District officials:

1. Highways
2. Vocational-Technical Schools and Higher Education
3. Industrial Site Development
4. Housing
5. Sewage Facilities
6. Hospitals
7. Tourism and Recreational Facilities
8. Mine Area Restoration
9. Flood Control

In addition, the proposed Keystone Corridor would bring a new system of high-speed rail freight service to the District and would serve as a magnet to attract growth industries like research and development and machinery and related products. As pointed out in the discussion of employment, the Turnpike District must seek to increase its share of employment in growth industries, an effort that would be greatly aided by the Keystone Corridor because "The industries with the greatest growth potential are the industries with the greatest demand for high-speed transportation," according to the State's consultants. Among the many options available to the State and Federal governments, this new transportation system promises the most revolutionary economic impact on the State and the Districts the route crosses.

NORTHERN TIER LOCAL DEVELOPMENT DISTRICT

The Northern Tier Economic Development Association has been established by the leaders of Bradford, Sullivan, Susquehanna, Tioga, and Wyoming Counties. This five-county area lies atop the Allegheny Plateau next to the New York state line. The deeply dissected plateau has been formed by the tributaries of the Susquehanna River which drain most of the 4,000 square mile District and by glaciers that rounded the District's hilltops 70,000 years ago.

Today, the Northern Tier Local Development District has an estimated 146,000 population and a density of 36.4 persons per square mile, the next to the lowest among the Districts of the State. This population is distributed widely throughout the countryside on farms, in small farming communities, and in a few larger trading and manufacturing centers, none of which exceeds 10,000 population.

Sometimes called the "Northeast Dairy Region," the District until 1950 had more employment in agriculture than any other industry group. Even today, as the proportion of farming jobs has declined to less than a fifth of all employment and manufacturing has increased to about one fifth, rural settlement patterns predominate. As a result, many of the economic and social functions of urban areas are performed by cities north and south of the District. Elmira and Binghamton, New York, to the north, and Scranton and Wilkes-Barre to the south are major sources of employment, key wholesale and retail trade centers, and the locations of cultural attractions which draw people from the District.

The District's agricultural heritage remains an important part of the contemporary scene although the number of farms declined by a third during the fifties. By 1965, the District's agriculture ranked it third among Appalachian

Districts in Pennsylvania. The loss of many farms through consolidation or abandonment has had a positive side effect as families from outside the District have bought farm houses for vacation homes, thereby stimulating the real estate market, reinforcing the tax base, and maintaining buildings that might otherwise have been abandoned.

This change from farms to vacation homes is in keeping with a character the District has had for decades. Sullivan County, which contains the famous Eagles Mere private resort and many glacial lakes, is sometimes boosted as the Switzerland of Pennsylvania. It and its neighbors have long attracted tourists, but only recently have the counties banded together in the Endless Mountains Association, a tourist promotion agency serving all the counties except Tioga at the western end of the District.

The natural beauty of the District underlies its success as a tourist area, and the commercial forests, covering two-thirds of the District's land area, are an important part of the attraction. They also are an important ingredient in the District's economy because an eleventh of all manufacturing jobs are forest-related.

Perhaps the Northern Tier District can best be described as an area with a rural non-farm character - non-rural and non-urban at the same time, yet decidedly not suburban. The District's farming heritage is giving way at least economically to typically urban kinds of employment. Farmers have gone to factories to work and have either given up farming or allowed it to become a part-time activity. But they have been noticeably reluctant to leave their farm homes and move to larger urban areas. Population increases in the fifties occurred in the countryside, not in the District's urban areas.

In many other areas, where agriculture is a declining activity, many small cities may draw attention away from the changed character of the countryside, but that distraction is not present in the Northern Tier District.

Instead, the population is distributed widely in small communities and in the countryside, compounding the always difficult problem of organizing effectively to pursue development objectives. As many economic studies have illustrated, easy face-to-face contacts are of immeasurable value in engendering trust, confidence, and rapid decisions. The converse is that even among men of goodwill and common objectives who see one another infrequently, progress is often extremely time-consuming. In the Northern Tier District where the handicap of a scattered population is fully recognized, important steps have been taken to overcome it. The Northern Tier Regional Planning Commission was established in 1965, and since then the Northern Tier Economic Development Association has been created.

Each of these districtwide programs has a somewhat different thrust, but at the same time many similarities. None is more important than the support it gives to the counties in their efforts to join together for effective action in economic, social, and community development. In these efforts they are not only pooling money, but perhaps more importantly they are sharing talent and experience which is an even more crucial element in development than money.

Despite the scattered population, the Northern Tier District, like other Districts, has economic activity concentrated in urban places. These economic activity centers are small and largely satellite to the wholesale and distribution centers in southern New York and northeastern Pennsylvania.

SAYRE-ATHENS-SOUTH WAVERLY, located on the Susquehanna River at the New York state line, is the District's largest activity center. It is comprised of Sayre Borough (population 7,735), Athens Borough (4,515), South Waverly (1,298), and Waverly, New York (6,037) plus a surrounding urban fringe of about 7,300 people, 5,000 of whom live in New York. The hinterland population of this center is estimated to be only about 1,800 people, bringing the population of the entire economic activity area to 28,685. The Pennsylvania share is 17,448, which is one-tenth of the total District population.

For many years, the area was the site of railroad repair shops for the Lehigh Valley Railroad, but these operations have been shifted elsewhere as the road has undergone consolidation and modernization. The trained labor force left behind was adaptable to the needs of the manufacturing industries which have become the area's leading source of employment. The non-electrical machinery category accounts for almost 1,700 jobs in the economic activity area, electrical machinery 370, and apparel 315. New small plants producing wood products and apparel have located in these communities in recent years.

The Sayre-Athens-South Waverly economic activity area is included statistically in the labor market reports for Bradford County which include also Towanda, Troy, and Canton, the other economic activity centers in the County. Throughout the county, manufacturing is the most important source of employment, accounting for an estimated 6,100 jobs in 1967; agriculture was next in importance with 2,800, while government and services each had 2,300 jobs. All told, the County's 19,400 employment is about two-fifths of the District total.

SUSQUEHANNA-OAKLAND-GREAT BEND-HALLSTEAD in northern Susquehanna County is next in size among the District's economic activity areas with an estimated total population of 10,600. It lies south of Binghamton, New York, and for statistical purposes is included in the labor market of that City's metropolitan area. The largest of these several small communities is Susquehanna with a 1960 population of 2,591. The several boroughs and townships that make up this loosely knit urban area have an estimated 7,000 population and are surrounded by a hinterland with an additional 3,600 people. The area's people thus comprise 7 percent of the District's population.

Many residents commute via route I-81 to jobs in the Binghamton area. In Susquehanna County, manufacturing is the major source of employment and in the economic activity area includes primary metals (174 employees), apparel (75), lumber (44), non-electrical machinery (38), and textiles. Of this manufacturing employment, 27 percent of the jobs are held by women.

WELLSBORO, an economic activity area in central Tioga County, has an estimated 9,300 population, about 6 percent of the District total. This is made up of 4,900 people living in Wellsboro and the surrounding urban area plus 4,400 living in the hinterland. Thus, little more than half of the population lives in the economic activity center itself (94% does in the Sayre-Athens-South Waverly area).

The Wellsboro Chamber of Commerce has made the nearby gorge of Pine Creek famous as the Grand Canyon of Pennsylvania and the area has benefitted from the presence of three nearby state parks and six state forest picnic areas in attracting tourists. However, the Wellsboro area's major source of employment is manufacturing. A pressed glass plant with almost 600 employees is the largest employer; others include a non-electrical machinery producer with 280 workers and a metal fabricator employing 154.

Wellsboro is part of the labor market area which includes all of Tioga County. The major sources of employment for county residents are manufacturing (2,700), government (2,100), agriculture (2,000), retail and wholesale trade (1,200), and services (1,100). The 11,900 jobs of the County in 1967 made up a fifth of the District total.

MANSFIELD-BLOSSBURG is an economic activity area in east central Tioga County. Mansfield, with a population of 2,600, is the home of Mansfield State College which has a 2,600 enrollment. Blossburg, to the south on U.S. 15 with a 2,000 population, has a metal fabrication plant employing 450 people.

The urban population is estimated to be 5,800, and the hinterland population about 1,600. The area's total population is about one-twentieth of the District total.

In addition to the metal fabrication plant at Blossburg, the major source of jobs is Mansfield State College which is expected to increase its enrollment to 3,700 by 1977. Already government employment (which includes state college jobs) is the second most important source of work in the County, and this increase in college enrollment suggests continued growth in the governmental sector. The prospect of job increases from college employment is particularly desirable from the standpoint of development because it brings in well-educated people with energy and leadership potentials.

TOWANDA-WYSOX in central Bradford County is an economic activity area with a population of 9,000, of which 5,800 live in Towanda, an estimated 2,500 in the surrounding urban fringe, and another 2,200 in the hinterland. This economic activity area contains 6 percent of the District's total population.

The employment figures cited in the Sayre-Athens-South Waverly description relate also to this economic activity area because they are reported for all of Bradford County. As was mentioned, manufacturing, agriculture, services, and government are the four leading sources of employment. In Towanda-Wysox, the main metallurgical and chemical plant of one of the Commonwealth's leading electrical machinery companies employs about 1,200. Two other manufacturing plants are located here - a textile mill with 75 employees, and an apparel factory with 61. A hardboard plant attracted to Wysox in 1963 because of the District's timber resources recently announced plans to expand employment from less than 50 to around 475 over the next few years.

ELKLAND-KNOXVILLE-WESTFIELD is an economic activity area which stretches 13 miles along route Pa. 49 in northwestern Tioga County next to the

New York state line. Its estimated population is 7,400, of which 2,600 live in and around these three communities and the remainder live in the rural hinterland.

As in the case of Wellsboro, its neighbor to the southeast, the Elkland-Knoxville-Westfield economic activity area benefits from surrounding recreation facilities including the Cowanesque Reservoir on the Cowanesque River. Many of its people commute to jobs in Corning and Elmira, New York. There are three manufacturing plants in the area - 2 leather plants with 724 employees and an electrical machinery plant with 100 employees.

MONTROSE, the county seat of Susquehanna County, is the center of an economic activity area with a population estimated at 5,100. The Borough itself has about 2,400 people and is surrounded by a small urban fringe of about 300; the remaining 2,400 people live in the hinterland.

While Montrose, like the remainder of Susquehanna County, is part of the Binghamton Standard Metropolitan Statistical Area and is therefore considered to be part of a larger, multi-county labor market, it has a substantial manufacturing base of its own. Over 1,000 jobs are in a plant in South Montrose which produces aircraft parts. According to a recent announcement, employment is to expand by at least three hundred. In addition, there are 197 jobs in two lumber mills, 125 jobs in a leather factory, and 52 jobs in two printing plants; a shoe factory recently announced an expansion requiring 129 new employees. Many of these jobs are held by women - 43 percent in 1966 - suggesting that many of the economic activity area's men commute to Binghamton for employment.

CANTON in the extreme southwestern corner of Bradford County is a center of 2,100 people surrounded by a hinterland of 2,000. It has a paper plant with 148 employees, a plastics plant with 119, and according to a recent announcement will have another paper box plant with 40 employees.

It is located in the heart of large holdings of State Game Lands and State Forest Lands, and is consequently a center for sportsmen.

TROY is ten miles to the north of Canton and is a community of 1,500 people surrounded by Troy Township with another 300 people and 1,700 living in the rural hinterland beyond. Two textile plants with 106 employees and three printing plants with 96 jobs are the major manufacturing enterprises. As might be suspected, much of this is female employment. In the economic activity area 62 percent of manufacturing jobs were held by women in 1966.

Troy is located about 24 miles directly south of Elmira, New York; many of Troy's residents commute to work there. Other centers which attract its residents are Towanda, 21 miles to the east, and Mansfield, 17 miles to the west.

DUSHORE-LAPORTE is an economic activity area in Sullivan County. Laporte is the County seat and has a population of 195, while Dushore has a population of 731. In all, the economic activity area has approximately 2,500 people.

Sullivan is the State's second smallest county with an estimated 1965 population of 5,600, down 600 from 1960. The Dushore-Laporte labor market area covers the entire county and reflects an economy based on manufacturing despite the fact that it is an area of great attraction to tourists. Of the 2,100 estimated 1967 employment in the county, manufacturing with 600 jobs is the leading source of work, followed by government (400), services (300), and farming (300). In the economic activity area itself, leather manufacture accounts for 230 jobs, apparel for 205, and food for 70.

TUNKHANNOCK in central Wyoming County is satellite to the influence of Scranton and Wilkes-Barre in the Northeast Local Development District.

In Wyoming County, manufacturing accounted for about 1,500 jobs at the end of 1967, with the District's other major employers - services, government, and agriculture - ranking behind. Apparel and leather plants in Tunkhannock provide about 275 jobs. A paper mill manufacturing tissue has constructed a large new plant and is in the process of building up employment to 1,500.

FOREST CITY in the southeastern corner of Susquehanna County has 529 manufacturing jobs and a population of 2,651. It lies eight miles north of Carbondale in the Lackawanna River Valley and is a part of the Scranton/Wilkes-Barre urban complex. Its major sources of manufacturing employment are apparel (323 jobs) and leather (193). Many of its residents commute to Carbondale and Scranton to manufacturing and other jobs.

DISTRICT CONDITIONS

THE PEOPLE

The Northern Tier Local Development District has already been described as a rural-non farm area. While farming was once the dominant source of employment and gave the District an agricultural and rural quality, this is no longer the case. But as farmers quit farming and found jobs in factories of nearby towns, they did not leave their farms and move to the cities. In fact, at the same time farming was declining in the countryside throughout the District, the population was increasing there. Instead of becoming more urban in the fifties as was happening throughout much of the Nation, the Northern Tier District was becoming less so. Only three of the District's counties - Bradford, Susquehanna, and Tioga - were reported by the U. S. Bureau of the Census as having urban populations and in all three there was a slight decline during the fifties in the proportion classified as urban. By 1960, only 22 percent of the people lived in urban places as defined by the U. S. Bureau of the Census.

Indeed, during the fifties the District gained 5,000 people, but all of this increase was classified as rural. This suggests that the character of the countryside may be changing from farming, but that the area is not necessarily being abandoned. Only Sullivan County experienced a population loss during the fifties while all other District counties had increases. A 3,000 increase came to Bradford County - the District's largest - with 38 percent of the District's total population in 1965.

Even though the population of the countryside grew during the fifties, the District lost 11,492 people through migration; 56 percent were young adults. This loss, while small in an absolute sense when compared with other Districts that lost 60,000 or more, amounted to 8 percent of the Northern Tier's 1950 population.

Population estimates for the 1960-65 period suggest that the tempo of this exodus has stepped up. The estimated loss for the five-year period is

TABLE 32

OUT-MIGRATION FROM COUNTIES IN THE NORTHERN TIER

County	1950-1960	1960-1965
Bradford	- 3,434	- 4,076
Sullivan	- 1,168	- 831
Susquehanna	- 2,434	- 1,690
Tioga	- 3,178	- 3,208
Wyoming	- 1,278	- 992
District Total	-11,492	-10,797

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates.

about 10,800, a total almost equal to that for the previous ten-year period. If the same proportion of young people leads this movement, District leaders have cause for deep concern.

The supposition of much of this Plan report is that people follow jobs, that unemployed people move in search of work, and that young people move in search of better jobs. Events of the national economy and improvements in the State and District economies suggest that migration trends may have abated since 1965 because of improved employment opportunities. Unemployment rates have been dropping and job totals have been increasing so that the outlook is for a slight increase in population between 1965 and 1975. The 2 percent population loss of 1960-65 is expected to be offset by a 3 percent gain in the 1965-75 period.

TABLE 33

NORTHERN TIER POPULATION BY COUNTIES FOR 1960, 1965, AND 1975

County	1960	1965	1975
Bradford	54,925	54,200	56,700
Sullivan	6,251	5,600	5,800
Susquehanna	33,127	33,000	33,400
Tioga	36,614	35,600	35,700
Wyoming	16,813	16,400	17,500
District Total	147,730	144,800	149,100

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates and projections.

Census figures for 1960, the estimates for 1965, and the projections for 1975 are shown in the table above; they point to the fact that no large increases are expected in any of the District's counties. While there is reason for satisfaction that the downward plunge from 1960 to 1965 will be reversed, there cannot be much comfort in the 4,300 predicted growth in the 1965-75 period. The District will still lose an estimated 7,200 during these same years through out-migration.

EMPLOYMENT

For readers who omitted other District chapters, it is necessary to repeat that these population projections were derived solely from employment projections. Migration became a residual - the difference between the predicted natural increase of the population and the number of people that future employment would support.

The purpose was not to predict the future so much as it has been an attempt to see what is likely to occur given the present knowledge of the Pennsylvania economy. District leaders, State officials, and others may evaluate these projections and perhaps alter them. More importantly, they may decide to alter conditions if the future expected is not to their liking.

In an important sense, the economy has been the motive force for population shifts experienced in Pennsylvania, although it is well-known that some unemployed people do not move in search of jobs and that others move for reasons such as climate and culture rather than economic reasons. Where job opportunities are enticing and plentiful, however, people are attracted, whether they are long-time residents or migrants from elsewhere. Hence, a fundamental goal of development officials is widened job opportunities and expanded incomes for residents.

In the Northern Tier District, the major task for more than a decade has been job creation to overcome high rates of unemployment. In 1958, an eighth of the District's work force was jobless. This declined to a tenth in 1960, where it remained through 1962. By 1965, the unemployment rate was down to 5.7 percent, and it has kept moving downward so that by the end of 1967 it was 4.0 percent. In part, these rates have declined since 1965 because of the booming economic conditions resulting from the Vietnam conflict.

Before 1965, however, lowered unemployment rates were traceable not only to more jobs, but to a decline in the number of persons seeking work. Between 1960 and 1965, the jobless total dropped 1,900 throughout the District while total employment increased by 1,300. Thus, 600 people dropped out of the labor force. There were about 10,700 out-migrants from the District during that period.

The assumed unemployment rate for 1975 is 3.5 percent, a rate that is not intended as a forecast but as a practical level above which people will begin looking elsewhere for jobs.

Employment in 1975 was projected on the basis of changing shares of employment by industry for each labor market area of the State. Data for 1965 employment were the most recent used to eliminate the sudden rises in employment in 1966 and 1967 resulting from the Vietnam conflict. For the Northern Tier District, the results are a decided improvement.

The table below shows the industry sectors responsible for the expected changes and highlights the fact that 4,100 of the 5,900 increase is expected in manufacturing. While there is an air of improbability in that over two-thirds of all new jobs will be in manufacturing when only a quarter of the old jobs have been there, this predicted growth is actually a reflection of the District's performance in the recent past. Its share of manufacturing employment has grown faster relative to the rest of the State than its share of non-

TABLE 34

NORTHERN TIER LOCAL DEVELOPMENT DISTRICT EMPLOYMENT (IN THOUSANDS)

Industry Group	1960	1965	1975
Agriculture	8.9	8.3	6.2
Mining	0.1	0.1	0.1
Contract Construction	0.3	0.7	1.1
Transportation, Communications, Public Utilities	2.4	2.3	2.4
Trade	4.7	4.7	5.8
Finance, Insurance, Real Estate	0.5	0.5	0.7
Services	4.5	4.8	5.8
Civilian Government	5.2	6.5	8.8
Manufacturing	11.3	11.6	15.7
Food	0.8	0.8	0.8
Tobacco	-	-	-
Textiles	0.6	0.2	0.1
Apparel	1.2	1.8	2.4
Paper	0.3	0.2	1.8
Printing	0.3	0.4	0.4
Chemicals	*	*	*
Petroleum	*	*	*
Rubber	*	0.1	0.2
Leather	1.9	1.8	1.4
Lumber, Furniture	0.9	0.9	1.2
Stone, Clay, Glass	0.6	0.5	0.5
Primary Metals	1.4	1.4	2.2
Fabricated Metals	0.4	0.6	0.6
Non-electrical Machinery	1.8	1.8	2.1
Electrical Machinery	0.7	0.2	0.6
Transportation Equipment	0.1	0.7	1.1
Instruments	0.1	*	0.1
Miscellaneous	0.2	0.2	0.2
Sub-total Agricultural and Wage and Salary	37.9	39.5	46.6
Self-employed	6.8	6.5	5.3
Total	44.7	46.0	51.9
Unemployed	4.5	2.6	1.8**

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* Fewer than 50 employees.

** 3.5% unemployment rate assumed as point at which out-migration begins.

Source: Pennsylvania Bureau of Employment Security, Department of Labor and Industry; Pennsylvania Department of Internal Affairs; Pennsylvania State Planning Board.

manufacturing employment. Hence, the low growth projections for trade, services, and finance, insurance, and real estate.

Usual rules-of-thumb project two or three non-manufacturing jobs for every new manufacturing job on the theory that more services will be demanded by manufacturing workers. In the Northern Tier District, some expansion in these sectors is projected, but service type industries seem to thrive best in urban areas. Their poor past performance in the District may then be more the result of small communities than the lack of basic industries providing payrolls.

This faster growth of manufacturing employment than non-manufacturing employment may be another quality that distinguishes the Northern Tier District from more typically urbanizing areas. Certainly fast growth of manufacturing is not considered typical of rural areas, a fact that seems to reinforce the earlier suggestion that the area is not typically rural. And slow growth of non-manufacturing industries is not an urban phenomenon - in fact, some Appalachian specialists assert that urbanization itself prompts growth in non-manufacturing industries.

So employment growth as well as population distribution seem to suggest living patterns in the District that conform neither to rural nor urban patterns as they have been defined in the past. For the people of the District, these living patterns are probably considered the most convenient of the options before them, and not particularly unusual. Since many former farmers have turned to factories for work, it is understandable that they should remain in their farm homes when possible.

A large proportion of the District's manufacturing employment - 35 percent - is women who are typically secondary wage earners in their families. And just as typically they are employed in low wage paying industries. In the Northern Tier District low wage paying industries have accounted for more employees than either medium or high wage paying industries. As the table below illustrates, this condition is expected to be altered by 1975 when only a third of manufacturing jobs will be in the low wage category.

TABLE 35

PROPORTION OF MANUFACTURING WORKERS BY WAGE CATEGORIES

Wage Category	1960	1965	1975
High Wage	15.9	21.6	23.6
Medium Wage	41.6	36.2	42.6
Low Wage	42.5	42.2	33.8

Source: Pennsylvania Department of Internal Affairs, unpublished data.

In both Pennsylvania and the United States, only a quarter of all manufacturing jobs were in low wage paying industries in 1965 compared to the 42 percent of the Northern Tier District. By 1975, the District will drop 8.4 percent, thus showing a marked improvement in comparison with the State, which is expected to reduce the proportion of low wage paying industries by 2 percent. The District will still have heavy employment in low wage paying industries and presumably a continued high proportion of female employment.

The employment projections discussed above give absolute totals, but obscure other changes that are occurring in the economy. In themselves, they do not reveal whether the District's growth has kept pace with the State's, where the differences are, and - most important of all - what caused the differences. The differential shift analysis seeks to isolate the several factors at work in the District's economy so that development officials can diagnose the strengths and weaknesses and then act.

The differential shift table in the Appendix shows a breakdown of the

District's performance in comparison with the State for the 1960-65 period. Had the District performed as well as the State in each of its industries, it would have gained 2,730 jobs (the total at the bottom of the Pennsylvania growth column). But as the total change column total shows, the District gained only 1,600 jobs. So there was a downward shift of 1,130 jobs.

Perhaps the greatest value of the differential shift table is that it shows exactly which industries contributed to this relative decline. Performance of an individual industry is determined by two factors - growth characteristics of the specific industry and competitive factors of an area. When compared with a larger area like the State or Nation, the performance of each factor can be computed as is shown in the table.

The column "Industrial mix effect" is the sum of the growth characteristics of individual industries in Pennsylvania. If each of the District's industries performed individually as they did in the State, the total mix effect would be the sum of these numbers. This mix column shows a negative 1,190 jobs in the Northern Tier District, indicating that the District is heavily burdened with industries that are either slow growing or declining. An investigation of this column quickly reveals that agriculture with a relative loss of 1,640 jobs causes this extremely negative shift. Total non-farm employment would reveal a positive industrial mix in the area relative to the remainder of the State.

The "Competitive effect" column of the table reveals the ability of a local industry to compete with its counterpart in the remainder of the State. This is the factor of most concern to local development officials because it reveals whether the District enjoys any advantages in attracting new industries or inducing existing industries to expand. Overall, the District showed a positive competitive effect of 60 jobs relative to the remainder of the State.

It is apparent from the table, however, that the competitive effect was not sufficiently strong to offset the losses resulting from the unfavorable industrial mix; hence, the net relative change of -1,130 (-1,190 + 60 = -1,130).

Major contributors to the District's unfavorable industrial mix include:

Industry	Employment Change Related to the Industrial Mix
Agriculture	- 1,640
Transportation, Communications, Public Utilities	- 300
Leather Products	- 220

Upward shifts in employment due to the competitive effect were significant in the following industries:

Industry	Employment Change Related to the Competitive Effect
Transportation Equipment	+ 580
Apparel	+ 500
Civilian Government	+ 420
Agriculture	+ 400
Construction	+ 370

While upward shifts in employment resulting from the competitive effect did slightly exceed the sum of the downward shifts, several important industries were unable to compete successfully with the same industries elsewhere in the State. These were:

Industry	Employment Change Related to the Competitive Effect
Trade	- 650
Electrical Machinery	- 500
Textile Products	- 360
Services	- 320
Non-electrical Machinery	- 270

TABLE 36

NORTHERN TIER INDUSTRIES EMPLOYING 1,000 OR MORE IN 1965

Industry Group	1965 Employment	State Growth Characteristic 1960-1965	District Performance Relative to the State 1960-1965
Agriculture	8,300	declining	above average
Government	6,500	rapid growth	above average
Services	4,800	rapid growth	below average
Trade	4,700	rapid growth	below average
Transportation, Communications, Public Utilities	2,300	declining	above average
Apparel	1,800	rapid growth	above average
Leather	1,800	declining	below average
Non-electrical Machinery	1,800	rapid growth	below average
Primary Metals	1,400	slow growth	below average

Source: Pennsylvania State Planning Board.

By 1965, the District's industries with 1,000 or more employees performed above the State average for the 1960-65 period in only two rapid growth industries - government and apparel. The two other sectors in which its growth was above average were agriculture and transportation, communications, and public utilities, both of which were declining industries in the State. As the table above illustrates, below average performance occurred in the District's other important sectors.

The table in the Appendix shows the combined results of the competitive effect and the industrial mix effect in the "Net relative change" column.

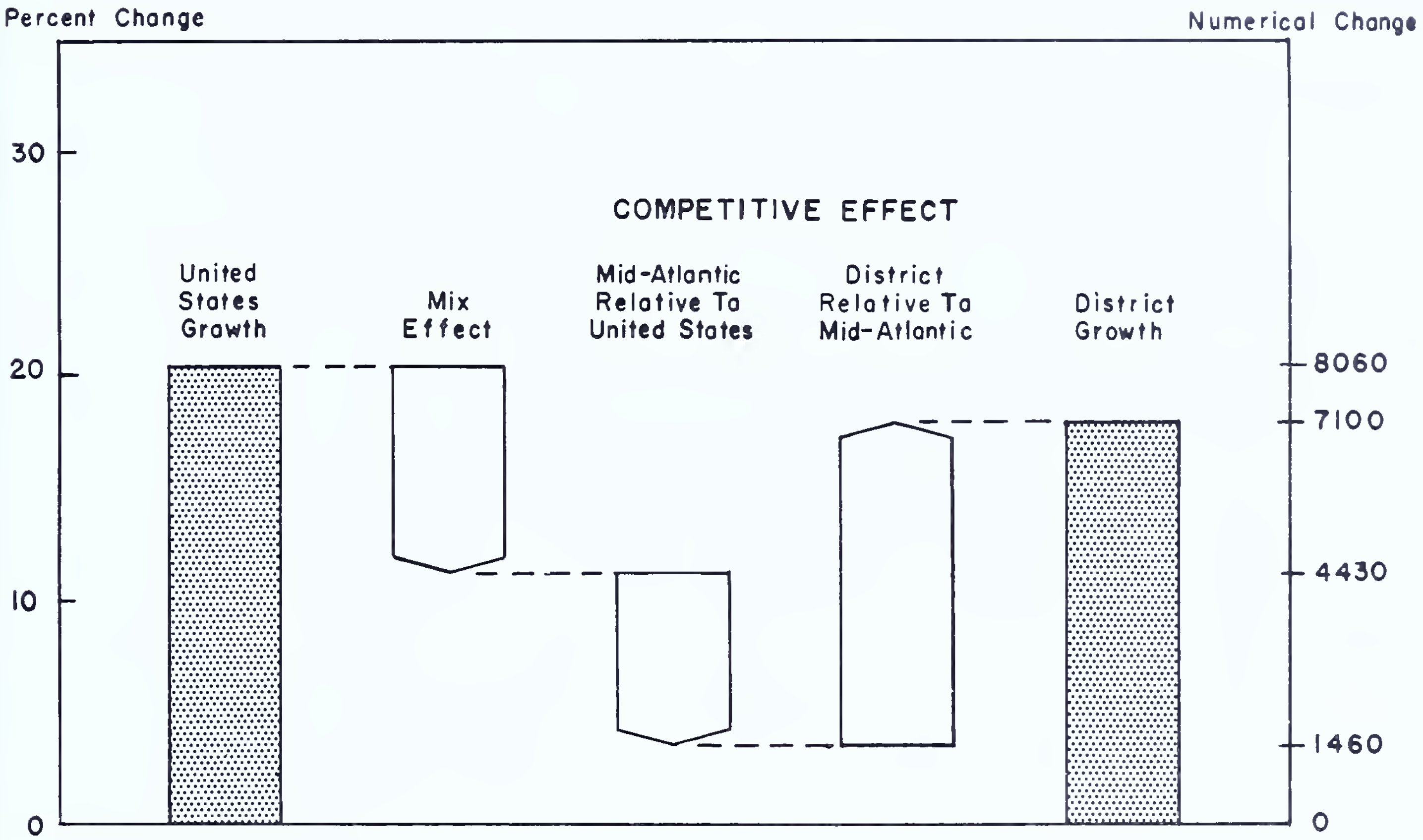
Industry	Net Relative Employment Change
Agriculture	- 1,240
Electrical Machinery	- 550
Textile Products	- 440
Trade	- 340
Transportation, Communications, Public Utilities	- 270
Leather	- 240

These were the industries most responsible for the District's low all-industry growth rate of 4.22 percent, a rate not quite three-fifths of the State's growth rate of 7.2 percent.

Turning to the future, the employment projections of the District were compared to those for the Nation and the Middle Atlantic states. The 7,100 job increase in wage and salary employment (which excludes the self-employed) is 960 less than the 8,060 jobs that would have resulted through performance at national growth rates. The reasons for this expected poor performance are traceable to the District's poor industrial mix and the 3,630 job downward shift caused by concentration in slow growth and declining industries.

CHART 13

COMPONENTS OF EMPLOYMENT CHANGE
NORTHERN TIER DISTRICT
1965 TO 1975



Source: Pennsylvania State Planning Board

Competitive advantages projected for the future partially offset the negative industrial mix effect of the District. A large number of industries have high positive values reported in the "Total competitive effect" column, values that indicate an ability for those industries to grow more rapidly (or decline more slowly) in the District than elsewhere. But this positive competitive ability was only sufficient to offset three-quarters of the loss from the poor industrial mix.

An interesting feature of applying the differential shift analysis to the future is that it shows District officials what is likely to happen based on employment projections. They can then anticipate where the District's performance may be less than their hopes and act to improve it.

Another interesting feature of this particular analysis has been the breakdown of the competitive effect into components attributable to the District and those attributable to the Middle Atlantic states. As most readers are aware, the Middle Atlantic states have not been competing successfully with the remainder of the Nation for several reasons - rapidly growing markets in western and southern states which have attracted new industry at the expense of the East coast, the general tendency toward industrial dispersion, the decreasing importance of raw materials orientation, industrial obsolescence, and rising unit costs of production in the East. Many of these are factors over which the District can have little influence, so it is helpful to determine how much of the competitive disadvantage lies with the larger region and how much with the District.

A breakdown of the total competitive effect into Middle Atlantic and District components indicates that while the District is expected to increase its share of total employment in the Middle Atlantic states, the Middle Atlantic states region is expected to lose shares of employment to the rest of the Nation. This indication can be taken as encouragement to development officials concerned about competition with surrounding states, although there is little satisfaction in knowing that this larger region is going to be losing shares to other sections of the Nation.

The totals show that relative to the Middle Atlantic states, the District is expected to experience an upward shift of 5,640 jobs. The poor showing of the Middle Atlantic states relative to the Nation (-2,970), while acting as a drag on the Northern Tier District's economy, is not expected to be sufficient to nullify the District's overall ability to compete with the remainder of the Nation. Only the 3,630 relative job loss resulting from a poor industrial mix (and most of that is caused by the District's heavy concentration in agriculture) causes the expected downward net relative change of 960 jobs in the District's economy.

In the 1965-75 period, the Northern Tier District is expected to show significant competitive advantages over the Middle Atlantic states in the following industries:

Industry	Employment Change Attributed to Competitive Effect
Paper Products	+ 1,590
Agriculture	+ 1,060
Trade	+ 900
Primary Metals	+ 850
Apparel	+ 800

But the District is expected not to compete effectively with the Middle Atlantic states in other major industries:

Industry	Employment Change Attributed to Unfavorable Competitive Effect
Civilian Government	- 460
Leather Products	- 360
Services	- 240

Downward shifts due to unfavorable industrial mix are expected to be:

Industry	Employment Change Attributed to Unfavorable Industrial Mix
Agriculture	- 4,440
Leather	- 400
Transportation, Communications, Public Utilities	- 300
Trade	- 290
Primary Metals	- 260
Apparel	- 200

The alert reader may compare these figures with those cited above that show the industries in which the District is expected to compete effectively with the Middle Atlantic states and find that the industry groups are much the same. So despite the District's unfavorable balance of nationally slow growing or declining industries, most of the industry groups are expected to perform better in the Northern Tier District than throughout the Middle Atlantic states.

Another measure of the District's projected changes shows the number (and proportion) of jobs in rapid growth, slow growth, and declining industries based on national expectations. Here, there is reason for optimism in the District. If the projections are realized, the proportion of jobs in declining industries will drop by a tenth of the total and increase almost as much in the rapid growth sector.

When the industries contributing to these changes are isolated, however, many of the Northern Tier District's major sources of employment are not

TABLE 37

NORTHERN TIER EMPLOYMENT CHANGES

Industrial Growth Category	District Employment 1965	District Employment 1975	Percent Distribution 1965	Percent Distribution 1975
Rapid Growth	16,300	23,100	42	50
Slow Growth	12,000	14,900	30	32
Declining	11,200	8,600	28	18
	39,500	46,600	100	100

Source: Pennsylvania State Planning Board.

TABLE 38

NORTHERN TIER INDUSTRIES EMPLOYING 1,000 OR MORE IN 1975

Industry Group	1975 Employment	National Growth Characteristic	District Performance Expectation 1965-75 Relative to: Mid-Atlantic	United States
Civilian Government	8,800	rapid growth	below average	below average
Agriculture	6,200	declining	above average	above average
Services	5,800	rapid growth	below average	below average
Trade	5,800	slow growth	above average	above average
Transportation, Communications, Public Utilities	2,400	slow growth	above average	above average
Apparel	2,400	slow growth	above average	above average
Primary Metals	2,200	slow growth	above average	above average
Non-electrical Machinery	2,100	rapid growth	above average	below average
Leather	1,400	declining	below average	below average

Source: Pennsylvania State Planning Board.

expected to perform at rates above the national or Middle Atlantic states average. Indeed, among the District's industries with a thousand or more employees in 1975, only three have rapid growth expectations nationally and in none of these is the Northern Tier District's performance expected to equal the national average growth rate.

Several conclusions can be drawn from the emerging trends that have been identified in these tables. One is that the District should attempt to capitalize on its ability to compete effectively with the Middle Atlantic states in industries such as paper, agriculture, trade, primary metals, and apparel in which it is projected to have significant competitive advantages.

Many of these are slow growth or declining industries nationally, so the District will not wish to direct all of its efforts toward effective competition with its regional neighbors. Instead it will wish to attract a mix of industries with greater growth characteristics than it presently has.

The District enjoys a competitive economic advantage over the Middle Atlantic states in several national growth industries - industries well rooted in the Northern Tier District's economy. Among these are contract construction; finance, insurance, and real estate; paper products; non-electrical machinery; and transportation equipment. It is logical to seek increasing shares of employment in them as well as in the above group.

Finally, leaders in the District will wish to find ways to improve the competitive position in rapid growth industries which are growing faster in the Middle Atlantic states than in the Northern Tier District. These are services, government, and fabricated metals.

In seeking greater employment in any of these sectors, the income producing characteristics and wage rates should be evaluated so that the greatest return on local effort is achieved. Thus, development efforts, to be most effective, must be focused even more precisely than is suggested by this analysis. For example, District leaders may wish to investigate the many needs of non-electrical machinery manufacturers and decide which ones would be most attracted to the District and which ones would be most desirable. Then efforts can be concentrated on companies producing such goods.

That kind of agreement on objectives and pursuit of them is the only recourse sparsely populated areas have when competing for new jobs with the Nation's metropolitan areas. And among the welter of programs, committees, and organizations at work in the industrial development field, the most effective appear to be those that are the most precise.

In the Northern Tier District there is recognition that the future can be shaped by the people of the District - that the employment projections disucssed above will not come about through fate. Rather there is much concern that the District's development problems and deficiencies be overcome so that these projections can be realized and perhaps exceeded.

Among the causes of concern is a factor described early in the chapter - the scattered population and the organizational difficulties that result. The absence of frequent face-to-face contact among development leaders weakens organization and makes strong leadership difficult. More importantly, it slows down effective, purposeful industrial development programming.

Achievement of economic and social development in the District is, of course, a broader interest than industrial development, and the District's communities here have several important physical problems requiring attention. Sewage treatment plants are needed in many communities; in others both sewer lines and treatment plants are required. Water facilities require expansion in some communities where new industries have already been attracted and the existing systems have become overloaded. Highways require realignment for high speed travel so that District communities can attract producers who require rapid transportation connections. And in several places attention to health facilities is needed.

Effective social and economic development is hampered in the District by a lack of experience in many communities in dealing with development problems. Recognition of problems and courses of action to be followed in solving them are at the heart of the planning effort which local leaders assert to be necessary. Such analysis and action is thought needed to overcome another key problem - lack of risk capital for private investments in the District.

These are the key development problems cited by District officials. Implied in them is the recognition that the District's people, natural resources, and public facilities are the major components that can be used to attract private investments in the Northern Tier District.

MANPOWER

The first concern of any area naturally is its people, and in the context of economic and social development that concern is most often expressed in efforts to broaden their social experience and to increase their ability to earn a livelihood. In the Northern Tier District, manpower development is a key issue since industrial development efforts are directly related to a readily available labor supply. However, the District's counties have not yet organized to make the most of the available supply.

There are no vocational-technical training facilities in the District except for nurses' training at the Robert Packer Hospital in Sayre. Only one county - Bradford - has progressed in consideration of vocational-technical education to the point of requesting that the State Department of Public Instruction certify an attendance area. In Bradford County, a 625 pupil school has been proposed at a cost of $3.7 million to be located near Towanda. This vocational-technical school should be constructed as soon as possible. District leaders have indicated that managers of local industries are working to explain the economic benefits that can be expected if the school is built. Elsewhere, development officials have expressed the conviction that vocational-technical training should be a high county priority.

District leaders have pointed out the interrelated problems prevalent in several parts of the District: a shortage of skilled labor, large numbers of unskilled and semi-skilled workers (some under employed) and the movement of farmers into industrial occupations. In one way or another, these problems all relate to the absence of worker training.

The need for skilled workers is obvious to all who work in industrial development programs. Since labor represents a large share of manufacturing expense in many industries, businessmen require some assurance that capable people will be available for employment, and more and more the public is assuming the responsibility for this training both to help attract industry and to assure citizens the ability to earn a livelihood.

The prevalence of many unskilled and semi-skilled workers reported in the District indicates that neither of these objectives is being achieved - that industries must provide on-the-job training or District residents must go elsewhere for schooling. Throughout Appalachia, large losses in mining and farming employment emphasized the need for worker retraining; the Northern Tier District is no exception. Between 1965 and 1975, the employment decline in the District's largest industrial sector, agriculture, is expected to be 2,100, which suggests the need for an extensive retraining program. In addition, there will be many high school graduates from the District's schools who will not go on to college.

It may be that the District's continued high out-migration in the early sixties was prompted by young people who lacked skills and the prospect of getting them unless they moved elsewhere. Whether or not this is part of the explanation of migration, there is no doubt that today's young people are repeatedly urged from every direction to get as much skill, training, and education as possible; when an area is bereft of opportunities, the decision to leave is more likely.

On a more practical and less theoretical level, the District finds itself in a position in which it must develop area technical-vocational schools just to keep pace with the rest of the State. Since technical training is of consequence to businessmen and other areas are providing it, so must the Northern Tier District provide such training so that it can compete effectively for new employment. (As the 1960-65 shift analysis of the District's employment showed, the District has only a slight competitive edge over the rest of Pennsylvania and most of this came from agriculture.)

The other obvious program relating to manpower development is college training which within the District is available only at Mansfield State College. While many students go to college outside the District, others with ability but insufficient money often do not go. In other Districts, branch campuses of the Commonwealth's major universities and colleges, as well as community colleges, have been established to offer the first two years of college training close to the student's home. Community colleges have been proposed by Northern Tier Local Development District officials in Wellsboro, Tunkhannock, Montrose, and either Sayre-Athens or Towanda.

NATURAL RESOURCES

The Northern Tier District has relied on natural resources for much of its economic activity until recently when non-resource oriented manufacturing plants became important. Still the water, timber, mineral, and agricultural resources loom impressively in the District's economy.

Mineral production in the Northern Tier District is not dominated by coal since only about one percent of the State's production comes from the bituminous mines of Tioga and the anthracite mines of Sullivan and Susquehanna Counties. By 1966, coal was the leading source of mineral income only in Sullivan and Tioga Counties; elsewhere, as the table below shows, sand and gravel and stone were more important.

TABLE 39

1966 VALUE OF MINERAL PRODUCTION IN THE NORTHERN TIER

County	Value	*Minerals Produced in Order of Value
Bradford	$ 664,900	Sand and gravel, coal, stone
Sullivan	115,000	Coal
Susquehanna	492,800	Stone, coal
Tioga	2,504,700	Coal, sand and gravel
Wyoming	720,300	Sand and gravel, stone
Total	$4,497,700	

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* Excludes value of natural gas, natural gasoline, LP gases, petroleum, and gem stones.
Source: Pennsylvania Bureau of Topographic and Geologic Survey.

The $4.5 million total value of production represents less than one percent of the State total, and only about 100 of the District's 49,000 workers were employed in mining in 1965.

Despite this low incidence of mining, the District has not been spared the adverse effects of mining. Mine acid in Tioga County is polluting the Tioga

River and Babb Creek and some small streams running into Bradford County. Mine water discharges amount to about 1.4 million gallons daily in Tioga County and about 432 thousand gallons daily in Sullivan County.

Unreclaimed strip mine areas have left scars in the District. Again, Tioga County has the greatest problem with 1,050 acres reported in need of attention in 1965. Bradford County was reported to have 80 acres, while the amounts are negligible in both Susquehanna and Sullivan Counties.

Forests are much more significant to the District's economy than are minerals. Some 1,100 manufacturing workers were employed in the District's leading wood using industries in 1965, and this number will increase as a hardboard plant and a tissue paper plant enlarge in keeping with announced plans.

While commercial forest land is prevalent throughout the District, there is a higher proportion in Sullivan and Tioga than in the other counties.

TABLE 40

NORTHERN TIER DISTRICT FOREST LAND IN 1965

County	Commercial Forest (acres)	Percent of Total Land Area
Bradford	316,100	51
Sullivan	256,800	85
Susquehanna	264,400	58
Tioga	518,300	73
Wyoming	137,400	63
District Total	1,493,000	58

Source: Pennsylvania Department of Commerce.

These forests produce about 10 percent of the sawtimber in the State and in some cases there has been over cutting. In Sullivan and Susquehanna Counties, the surplus of sawtimber that has built up over the years has been decreasing. In Bradford and Wyoming Counties, where there have been deficits in the past, the deficits have decreased substantially. By 1964, it was reported that Bradford had a surplus of 1.9 million board feet while Wyoming had reduced a 4.9 million board feet deficit in 1954 to 2.2 million board feet deficit in 1964.

For poletimber, which is used for pulpwood, fuel and firewood, and mine timbers and posts, the balance trends of the District are more favorable, showing consistent surpluses in all of the District's counties. Since poletimber is composed of smaller trees, this increasing surplus means that future mature forests can be expected in the District to be even more productive than today.

The recent location of a modern paper plant in Wyoming County and a hardboard plant in Bradford County attest to the attractiveness of the Northern Tier District's forests to many wood using industries. District leaders have an advantage over areas farther south where oak forests predominate simply because oak is not as valuable as the ash, beech, basswood, black brich, and hard maple found in the District's forests. Here the importance of species stands out because the average stumpage rates for northern hardwoods exceed oak by almost two to one. Black cherry trees in the Northern Tier District considered weeds and a troublesome nuisance to foresters in 1931 today bring the highest stumpage rates for use as furniture veneer.

That fact illustrates an important element in evaluating the forest potential of an area. Given the current technology, it is fairly simple to identify potential users, but perhaps more important are the latent uses that could evolve from new inventions. One that frequently has been mentioned is the development of a fuel cell that uses alcohol, a forest by-product. A demand like that for black cherry could develop overnight. For this reason, forestry specialists watch technological innovations closely, searching the implications for forestry in new inventions.

Farmers in the Northern Tier District have not enjoyed supplementary income from forest products as might have been suspected. By 1966, only one percent of the District's total farm receipts came from forest products. Instead, the Northern Tier District's typical farmer depends on livestock - particularly dairying - for nine-tenths of his income.

In 1966, farming brought $60 million to the District's farmers; this was only 7 percent of the State total and is explained by the small importance of agriculture in Wyoming and Sullivan Counties. Bradford, on the other hand, was ninth among the State's counties in total farm receipts and accounted for over a third of the District total.

TABLE 41

NORTHERN TIER AGRICULTURAL CASH RECEIPTS FOR 1965

County	Receipts from Crops	Receipts from Livestock	All Commodities & Government Payments
Bradford	$ 908,000	$20,671,000	$22,056,000
Sullivan	175,000	1,949,000	2,186,000
Susquehanna	527,000	14,230,000	15,087,000
Tioga	998,000	13,385,000	14,882,000
Wyoming	529,000	5,335,000	6,018,000
Total	$3,137,000	$55,570,000	$60,229,000

Source: Pennsylvania Department of Agriculture.

In the Northern Tier District, as elsewhere in Appalachia, the revolution in agriculture has been profound - between 1954 and 1964, the number of farms in the District declined by 37 percent. At the same time, the average farm size jumped from 162.7 to 213.6 acres.

Bradford County was the heaviest loser in farms, accounting for almost half of the District's decline, but much of the drop in number of farms resulted from consolidation. By 1966, it was still sixth among the State's counties in total farms, second in the number of dairy farms, and fourth in the number of livestock farms. (Susquehanna was fourth in the number of dairy farms.)

In other respects, the District's counties are outstanding as well: Bradford is second in cows and heifers and Susquehanna is fifth; Bradford is second in all cattle and calves - Susquehanna is seventh; Tioga is fourth in sheep while Bradford is seventh; Tioga is ninth in cows and it is fourth in broilers. In crop production, Bradford is second in hay, third in oats, and and fourth in maple products.

The outlook for agriculture is continued farm consolidation since current economics of farming discourage small units. Thus, the District can expect a movement out of agriculture by many farm workers, and as mentioned in the section on manpower, this implies substantial retraining in the District. A decline of 2,100 in farm employment over the 1965-75 period was projected for the District, and while the American farmer has a justly deserved reputation for hard work and resourcefulness, he needs training in adapting to non-farm employment. Viewed in this fashion, the surplus of farm labor can become an important manpower resource for District development, and the transition from agricultural to industrial employment for farmers can be a rewarding experience

PUBLIC FACILITIES

Through evaluation of the District's strengths and weaknesses, and by observing trends in the local economy, the Northern Tier Local Development District seeks to turn misfortune into benefit, discouragement into opportunity. Both manpower and resources have been evaluated in this light so that positive programs for development could be initiated. The proposed vocational-technical school in Bradford County represents the first steps in manpower development, and the location of a paper mill and hardboard plant show the influence of the District's resources in attracting new jobs.

Public facilities, in addition to manpower and resources, are important to any district's development efforts. In the Northern Tier District, leaders have made municipal water facilities top priority among their needs.

WATER DISTRIBUTION

Most of the District's economic activity centers do have adequate public water supplies, but many surrounding townships are inadequately served. This is the condition reported at Towanda, Sayre-Athens, Wellsboro, and Mansfield. Specifically, in North Towanda where the proposed vocational-technical school site is located and considerable residential development exists, a $135,000 extension of the Borough's system is under study. In Sullivan County, the communities of Dushore, Laporte, Eagles Mere, and Forksville need expanded systems to meet industrial and tourist development expansion needs.

In Tioga County, District leaders have urged an accelerated ground water study to establish the long-run availability of supplies from this source and to help evaluate additional water impoundment needs. At Mansfield, plans are underway to upgrade the Borough's water system to meet the needs of residential development and the expansion of Mansfield State College. The estimated cost is $1,000,000.

SANITARY SEWERS AND TREATMENT PLANTS

The District's second highest program priority is improvement of sewage disposal in many of the economic activity areas. In Sullivan, Susquehanna, Tioga, and Wyoming Counties these facilities were given top priority and in Bradford, they were rated fourth.

At Dushore in Sullivan County, sewer lines and a treatment plant are needed. The community has been cited by the State Sanitary Water Board for stream pollution and ordered to provide suitable treatment. Leaders point out that treatment facilities are needed to attract industry and that a housing project for the elderly which is proposed will need suitable sewage disposal facilities.

At Eagles Mere, septic disposal systems are reported to be contaminating Eagles Mere Lake and hurting the area's tourist economy. And at nearby Forksville, the northern gateway to World's End State Park, a sewer system is needed.

Conditions in Susquehanna County are perhaps more serious in that the entire Susquehanna-Oakland-Great Bend-Hallstead economic activity area lacks treatment facilities and is polluting the Susquehanna River upriver from Binghamton. Susquehanna and Oakland are under order by the Sanitary Water Board to stop polluting the river. Rough estimates of cost for each pair of communities - Susquehanna and Oakland, Great Bend and Hallstead - are $675,000 for the needed facilities, but thorough engineering estimates have yet to be developed. Since this pollution inhibits water sports, the river's value for recreation and tourist development is hampered.

At Forest City in the southeast corner of the County, the Borough has worked out an agreement with neighboring Lackawanna County to connect to its treatment plant. Funds are needed for construction of trunk lines and lift stations. At Thompson Borough, north of Forest City, a treatment plant is needed also.

In Tioga County, a $1,141,000 sewage treatment plant is needed in Mansfield to serve the Borough and the College. This project was ranked 13th on the list on the 1967-68 list of priority communities by the Pennsylvania Department of Health, and is reported to be ready to commence once funding is developed by the community. In Wellsboro, funds are needed to extend lines into Charleston and Delmar Townships where new development has generated unsanitary conditions. The existing Wellsboro system is considered sufficient for the present, but is expected to be strained as industrial expansion occurs.

Blossburg has recently completed a $1 million sewage treatment project which is expected to aid the community as it seeks new businesses.

At Elkland in northern Tioga County, a collection and treatment system is needed in much of the Cowanesque Valley except for the Westfield area which already has suitable facilities. Finally, Jackson Township, due east of Elkland, is reported in need of sewage treatment facilities, but no estimate of the size of the project is currently available.

An expanded sanitary sewage system and treatment plant to serve the Tunkhannock area in Wyoming County is rated as the single most critical project among the many reported by the Northern Tier Local Development District. The existing Tunkhannock system was adequate until the area suddenly became the location of a new paper mill with a projected 1,500 employees. Engineering studies are underway and preliminary estimates suggest that the necessary expansion will cost at least $300,000.

At nearby Factoryville, which is part of the Tunkhannock economic activity area, treatment facilities are also needed and also prompted by the area's considerable recent growth. Here the estimated cost is $775,000.

Mehoopany, to the east, needs treatment facilities as well, but no cost estimates have been established.

Treatment facilities also are needed at Laceyville. The community's deficiency will be aggravated by the growth expected from the construction of a large nuclear power plant three miles down river. The plant will be in operation by 1970, and clean water will be required for its cooling operations.

In Bradford County, sewage treatment projects were given fourth priority. The County's largest communities, Sayre and Athens, commenced work in 1966 on a $1,336,000 project with the aid of a $734,800 grant from the Appalachian Regional Commission. Other communities have not yet reached the construction stage. Extensions of the Towanda system to North Towanda to accommodate the proposed vocational-technical school will cost an estimated $325,000. Another to Wysox where the new hardboard plant is located (it is providing its own industrial waste treatment) will cost $550,000. And at Wyalusing sewage treatment facilities estimated to cost $650,000 are needed. The community has applied for aid to the Farmers Home Administration and was rated 56th in order of need among the State's communities by the Department of Health in its 1967-68 priority list.

Of all of these projects recommended by District officials, they have given the needs of Tunkhannock, Mansfield, Eagles Mere, North Towanda, and Factoryville - in that order - the highest priorities.

EDUCATION

The District's third priority program is community colleges which have been proposed in every county except Sullivan. Discussion of them was included in the section on manpower.

The existing audio-visual library at Mansfield State College should be expanded to provide more and better service to school districts.

An educational television "booster" system is needed to extend reception to areas in the Northern Tier District that are not now served and to become a part of the proposed Statewide educational television network.

HIGHWAYS

Fourth priority concern in the District is for improved highways - access roads to industrial and recreational areas, by-passes around activity centers, and cross-country routes. Among the access roads needed is one connecting the two reservoirs of the Tioga-Hammond flood control project in Tioga County. It will enhance the recreation potential of this project. Another proposed access road is one that will be needed to serve the nuclear power plant in Wyoming County.

By-pass routes are needed around several of the District's centers including Sayre-Athens and Towanda. In the 1967-73 Highway Program, these routes are scheduled for construction at a cost of $12.5 million. And in Sullivan County, this same plan calls for reconstruction of Pa. 87 around Dushore.

District concern extends to major highways as well since there is considerable commuting by local residents. Also a general conviction exists that the recreation potential of the District depends upon better highway connections to other sections of the country. The District's single high-speed highway is I-81 which connects Scranton and Binghamton through the eastern part of Susquehanna County. As such, it is of little benefit to the District's communities or to the important recreational facilities - the state parks. There is dissatisfaction in Susquehanna County with the connections to I-81, especially in the Susquehanna-Oakland area.

Several routes that cross the District need modernization. These include U.S. 15 (Appalachian Development Highway Corridor U) in Tioga County, U.S. 106 in Susquehanna County, U.S. 6 in Tioga, Bradford,and Wyoming Counties, U.S. 220 in Sullivan and Bradford Counties, Pa. 14 in Bradford County, Pa. 87 in Sullivan County, and Pa. 29 in Susquehanna County. Some of these improvements are already programmed by the Pennsylvania Department of Highways.

The terrain of the District, as in so much of Appalachia Pennsylvania, is responsible for the poor highway alignments that result in calls for better roads. In individual counties the emphasis varies, but in all counties highways rank near the top. In Susquehanna, highways are given second priority; in Bradford, Sullivan, and Wyoming, third; and in Tioga fourth. This repeatedly high emphasis given to roads highlights not only the actual physical conditions but also the psychological importance that good access and rapid connections have for investors and development officials.

MEDICAL FACILITIES

The Office of Economy Opportunity surveyed medical services throughout the Nation and found that the median number of doctors per 100,000 people in the Nation's counties was 61. Sullivan, Wyoming, and Susquehanna Counties fall below this norm while Tioga County has a rate of 76 and Bradford County a rate of 157. In medical care it is axiomatic that the more rural the population, the fewer the doctors, and in the Northern Tier this rule prevails.

Sullivan County, with an estimated population of only 5,600, has but three doctors and no hospital facilities. In the remainder of the District, there are eight hospitals with 830 beds. In addition to the 335 bed Robert Packer Hospital in Sayre, there are a 64 bed hospital in Troy and a 42 bed hospital in Towanda, thus giving Bradford County over half the total beds in the District.

Susquehanna and Tioga Counties each have two hospitals and Wyoming one. One of the two in Tioga County, the Blossburg State General Hospital, is operated by the Commonwealth, while in Wellsboro, the Soldiers and Sailors Hospital is the County's other general care facility. Montrose has a 26 bed hospital and Susquehanna has recently completed a 50 bed unit. In Wyoming County, a new 98 bed hospital has just been completed in Tunkhannock with the aid of the community's new paper mill managers.

The wide disparity in the number of doctors available to serve the District's population prompted the Northern Tier Local Development District to call for a study of health and medical needs. Such a study would range from the shortage of doctors in Sullivan County to the needs for nursing homes in Susquehanna County and the absence of sufficient medical facilities in specific centers such as Elkland in Tioga County. Bradford County leaders would like to see this study lead to a program of regional health programs and facilities.

Among specific projects proposed by District leaders are:

*a home for the aged in Bradford County:

*an $800,000 expansion of the Memorial Hospital at Towanda;

*a medical center in Sullivan County;

*a mental health center in Susquehanna County;

*a hospital affiliated nursing home in Susquehanna County;

*a hospital affiliation for nurses training programs in Mansfield and Wellsboro; and

*a hospital for the Cowanesque Valley (Elkland).

AIRPORTS

The sixth priority program in the Northern Tier District is airport development. Today the District has no scheduled airline service. Residents generally use the Broome County or the Chemung County airports in New York or the Wilkes-Barre/Scranton or Williamsport-Lycoming County airports in Pennsylvania. Of the 20 airports in the District only three are public. They are located in Bradford, Sullivan, and Tioga Counties; of them only the Bradford and Tioga airstrips are paved.

The Pennsylvania Airport Plan prepared by the Pennsylvania Aeronautics Commission recommends the improvement of the runway and the installation of new lights at the Towanda Airport and the development of a new facility in the vicinity of Sayre-Athens to replace the abandoned Blue Swan airport at Sayre. District leaders concur in the need. Local industrial interests are supporting a location study that is now in progress. This backing is considered important evidence of the value industrialists place on air travel facilities and of the impact on industrial development.

Elsewhere in the District, leaders in Tioga County place fourth priority on access roads and airports, but have not yet advanced any specific airport projects. In Wyoming County, airport development is given second priority. There the single existing private airport is closed and the opening of a new public facility is now only in the discussion stage.

HOUSING

Listed among the "very important programs" in the District is improved housing. Some indicators of needs are the 1960 census data which showed a very high proportion of "unsound" dwelling units in Sullivan, Susquehanna, Tioga, and Wyoming Counties. Other reports cite specific areas and particular needs. For example, the Susquehanna-Oakland-Great Bend-Hallstead economic activity area was mentioned as one with an abundance of old, rundown housing as was Forest City. Montrose, in contrast, was described as having a well-maintained housing stock.

Perhaps in the absence of systematic studies, the best indicator of problems is the fact that local groups are working to begin projects for lower- and middle-income families in Bradford, Sullivan, Tioga, and Wyoming Counties. Most of them have prepared applications to the Department of Housing and Urban Development for assistance. With the newly developed assistance for non-profit and limited-dividend groups available through Section 207 of the Appalachian Regional Development Act, these groups may be able to meet development expenses that otherwise frustrate volunteer housing development groups.

INDUSTRIAL SITE DEVELOPMENT

In the Northern Tier District there are several groups organized to attract industry to the District. In Bradford County alone there are five groups, a number causing some District officials to suggest that consolidation of efforts might be more productive. Indeed, a recommendation of the Northern Tier Local Development District is that industrial development activities be organized at the District level in order to be more effective in the competition with other areas.

Individual efforts of the several industrial development organizations since 1960 have been impressive. Many of them have used Pennsylvania Industrial Development Authority financing to attract new industries. Bradford County has attracted eight plants with planned employment of 938; Sullivan 2 plants with 183 jobs; Susquehanna one plant with 43, and Tioga 2 plants with 425.

Other plants have been attracted without the aid of PIDA financing. The reasons for success are varied, but as the section on employment highlighted, the District has shown peculiar ability to attract jobs in some industrial sectors such as paper, trade, primary metals, and apparel. Perhaps as important is understanding what contributed to this success and what is needed to maintain it.

Among the measures proposed by District officials are the establishment of financing pools and the site development of industrial parks. Neither of these proposals is far enough advanced to determine what resources will be needed. However, the need of industrial park development in the Sayre-Athens area has been recognized.

TOURISM AND RECREATION

A significant recommendation of the Northern Tier Local Development District is the request for technical assistance to the Endless Mountains Association to develop the vast recreation resources of the Northern Tier region. Four of the five District counties (Tioga is the exception) have formed this association which has promoted the existing recreation resources of the area. Among these are four state parks with four thousand acres and eleven state forest picnic areas.

The District's undeveloped resources are considered more significant. Already 190,000 acres are held in state forests, 160,000 acres in state game lands, and 2,800 acres in fishing areas. Privately held lakes and resort areas have yet to be inventoried, but in areas where there are no existing state parks, these are the primary outdoor recreation attractions.

In Tioga County, two small watershed projects for flood control, recreation, and wildlife propagation are nearing completion to complement the three state parks and other publicly owned resources of the area. Among these is Beechwood Lake, an 80 acre reservoir for boating and fishing in the northwest section of the County.

Two other impoundments which may have recreational benefits are the Tioga-Hammond reservoir and mine drainage abatement project and the Cowanesque River flood control reservoir. The Tioga-Hammond project was recommended as a priority project in the Pennsylvania State Water Resources Supplement. To be a successful recreational project, acid mine pollution of the Tioga River must be abated to preserve the water quality necessary for fish propagation and swimming. The U. S. Army Corps of Engineers estimates the cost of pollution abatement to be $7.25 million and the cost of the reservoirs, which will provide flood protection for communities in New York, to be $57.5 million.

The Cowanesque River flood control reservoir site is northwest from the Tioga-Hammond site and may have recreational potential if a useable pool is developed. The permanent pool will be about 160 acres, and will cost about $31.5 million to construct. This is an authorized Corps of Engineers project which has not yet been started.

Among other projects in Tioga County considered important by District officials are: a youth center in Whitneyville estimated to cost $50,000 for which funds are being sought; an archery range in Wellsboro; a summer playhouse in Mansfield; tenting sites throughout the County; an historical center in Wellsboro or Mansfield emphasizing arts and crafts of the past; and establishment of a credit pool to finance additional projects.

In Bradford County, the recreation potential of the Susquehanna River has not been developed.

In Sullivan County, where 36 percent of the land is owned by the State for forest and game use, the Little Loyalsock Creek multiple purpose impoundment is expected to be an important water sports recreational asset. In addition to recreation, its benefits will extend to flood control, water supply, and propagation of aquatic life. Access roads and site development (water and sewage facilities) are needed for resort development.

In Susquehanna County, preservation of the Birchardville one room school has just been completed as part of the preservation of Old Mill Village.

The Starrucca Viaduct is one of the oldest stone arch railroad viaducts in the world and has long been a tourist attraction. The opening of I-81 from Binghamton to Scranton has prompted construction of camps and second homes in the County, especially in the vicinity of Goldens Mill Lake, Deacon Lake, Butler Lake, and Salt Springs.

Swimming sites are needed in the County. Ponds have been proposed as one solution and a study has been recommended to determine the sanitation requirements involved and the effect on aquatic life. Other recreational projects proposed by District officials for Susquehanna County include: establishment of snowmobile trails; study for location of camp grounds and picnic areas at the Oakland Access Area on the Susquehanna River; a study of the feasibility of creating Homer Ross Lake; a youth center at Montrose; and a golf course at the same community.

Wyoming County shares with Susquehanna County the inherent recreation advantage resulting from many small lakes left from the last Ice Age. These are largely in private ownership and have accounted for most of the County's recreation facilities in the past. The United States Army Corps of Engineers has proposed a flood control and recreation reservoir on the Meshoppen Creek, a project recommended for further study in the Pennsylvania State Water Resources Supplement.

In the Tunkhannock area, several needs have been cited by District officials. Among them are access to the Susquehanna River, establishment of a municipal park, and construction of a swimming pool. They also propose construction of recreation facilities at Marsh Lake and Beaver Run Lake and an outdoor laboratory for teaching conservation at Russell Hill.

FLOOD CONTROL

Proposed flood control projects include the Mill Creek and Marsh Creek watershed projects in Tioga County, the Cowanesque River and Tioga-Hammond reservoirs (also in Tioga County), the Little Loyalsock Creek impoundment in Sullivan County, and the Meshoppen Creek flood control project in Wyoming County. Some of these have a recreation potential. Other projects needed for flood protection but lacking any identified potential for recreation are: the Bentley Creek impoundment in Bradford County; the Muncy Creek impoundment in Sullivan County; the Springfield and Dundaff Creek watershed protection projects in Susquehanna County; the Upper Tioga Creek watershed protection and Pine Creek erosion protection projects in Tioga County; and the Tunkhannock and Martin Creek flood control structures at Nicholson in Wyoming County.

OTHER PROJECTS

Other projects proposed or in progress in the Northern Tier District range from urban renewal in Mansfield and Blossburg to the establishment of sanitary land fill solid waste disposal sites in several sections of the District. Credit counseling for low income families, comprehensive land use planning, a home for the aged, and several studies of physical and social problems have also been mentioned. Perhaps more significant than a listing of these many proposals is the wide scope of concern exhibited by District leaders who constantly see the interaction of social, economic, and physical problems and recognize that improvements must come in all areas.

NORTHERN TIER DISTRICT GOALS AND OBJECTIVES

In the broadest context, District leaders feel that the strategy for success and improvements in the Northern Tier District must rest on two elements;

maximization of the potential for industrial growth and preservation of natural resources.

Ten goals and objectives have been identified to provide a focus for the necessary steps to District improvement.

They are:

1. Develop cooperation and modernize local government to be more effective in dealing with housing shortages, community facilities, and other needs of the District;
2. Develop and utilize all manpower resources to their fullest potential to reduce unemployment and underemployment;
3. Prepare comprehensive plans for municipalities in the District;
4. Develop and utilize woodland resources;
5. Increase agricultural productivity;
6. Develop and promote recreational resources;
7. Organize a comprehensive educational program;
8. Develop water resources for water quality improvement, flood control, land stabilization, and recreation;
9. Establish a credit organization to channel public and private funds into important projects;
10. Coordinate public and private efforts to attract new jobs to the District.

NORTHEAST LOCAL DEVELOPMENT DISTRICT

The leaders of seven counties in Northeastern Pennsylvania - Carbon, Lackawanna, Luzerne, Monroe, Pike, Schuylkill, and Wayne - have established the Economic Development Council of Northeastern Pennsylvania. This 4,400 square mile Northeast Local Development District has the third largest population among the 60 development districts in Appalachia, being smaller than only the districts centered on Pittsburgh and Birmingham, Alabama. Its 883,100 estimated 1965 population was four-fifths that of the 13 county area including Birmingham and a third of the population of the sprawling 11 county Southwest Local Development District dominated by Pittsburgh. Like these two larger development districts, the Northeast has a long legacy of coal mining activity which contribute significantly to the building of today's communities; unlike them, however, the Northeast did not also become a center of steel making as well as mining.

Instead it has undergone a transition to manufacturing and service employment far deeper and more significant than has been true in these other areas. This fact of deep, structural changes in the District's economy is a recurring theme of this chapter because it accounts for so much of the past, present, and future in the area. Indeed, this fact, more than any other, explains the cooperation of the mining counties of the west and the tourist counties of the east in one District which recognizes its unusual opportunity to attract new industry because of the appeal of its recreational amenities as well as other resources.

Physically, the District is much like other sections of the Ridge and Valley Province that extends from Alabama north through Pennsylvania. Parallel two to three thousand foot ridges separated by wide fertile valleys dictated most of the travel patterns that prevail today. This topography is typical especially of the western counties - Schuylkill, Luzerne, Lackawanna, and parts of Carbon - but to the east there is less uniformity as the glaciated Moosic and Pocono Mountains dominate the scene. Here low, eroded hills are interspersed with abundant lakes left by glaciers 70,000 years ago - lakes that have attracted tourists to the area from New York and Philadelphia for many years.

The District is drained by two of the State's major river systems - the Susquehanna and the Delaware. At Pittston, after breaking through the Allegheny Front, the Susquehanna is joined by the Lackawanna River and turns to the southwest coursing down the Wyoming Valley. The Schuylkill River, rising in Schuylkill County, and the Lehigh River, rising in Wayne County, flow to the southeast. Each breaches Blue Mountain and cuts across southeastern Pennsylvania to join the Delaware.

The routes of these three rivers - the Susquehanna, Schuylkill, and Lehigh - figured prominently in the District's early development by affording the best travel routes through the rugged terrain. Canals were built to haul out anthracite to cities on the eastern seaboard, and were soon followed by highways and railroads. The Delaware, by contrast, did not flow from the coal fields, so no canals were constructed above Easton, where it is joined by the Lehigh. It is today, as then, the State's eastern border with New Jersey and New York and one of the great unspoiled water courses in the eastern United States, a resource coveted for both the pure water supply it affords seaboard cities and the recreation it promises their people.

The District is being opened to New England, New York, Philadelphia, the Shenandoah Valley, and the Midwest with highways today just as it was connected to these areas by railroads in the past. I-80 (the Keystone Shortway) and I-84 provide east-west routes. The Pennsylvania Turnpike Northeast Extension already connects Scranton and Wilkes-Barre to Philadelphia and other points to the southeast. And I-81 will link the District's largest cities with Binghamton, New York, to the north and Harrisburg to the southwest.

For the changing District economy, this expanding highway network is as significant to the area's future as was the coming of railroads to move the "black diamonds" from the coal mines. Today's highways, as was the case with yesterday's railroads, make possible the movement of goods and people.

The highways will provide a greater ease of movement to and from the rest of Megalopolis and thereby improve the competitive position of the District insofar as transportation is concerned. That fact alone is expected to enhance the ability of District leaders to lure new industry into the area. In addition, the new highways are expected to bring tourists to the Poconos and to the Delaware Water Gap National Recreation Area that is being planned on the Delaware River. New industries are expected to develop from this growth in tourism, setting in motion an economic chain of events that promises to continue altering the District's economic structure.

NORTHEAST DISTRICT ECONOMIC ACTIVITY AREAS

A review of recent trends in the Northeast Local Development District's economic activity areas shows that rejuvenation has come almost exclusively from hard work by local development leaders.

To be sure, they had good material to shape this rejuvenation with. Large cities, industrious people, economic and community organizations, and leadership were all present in generous measure. Perhaps of equal importance was the highly urban character of the District - 72 percent of the people were classified as urban in 1960 - which helps people organize themselves for concerted action. The contrast with the Northern Tier Local Development District where only 20 percent of the people were living in urban areas in 1960 immediately comes to mind, especially because leaders in that District noted the organizational difficulties that derive from a scattered population.

SCRANTON/WILKES-BARRE is the most outstanding example of the urban character that typifies the Northeast District. Fifty-seven percent of the District's people live in the 40-mile continuous urban area stretching from Forest City southwest through the Lackawanna and Wyoming Valleys to Nanticoke. Here on about five percent of the District's land are 59 percent of the manufacturing jobs and 60 percent of the retail sales. While urbanizing townships contain a good proportion of both people and jobs, the great majority - over half of the District total of each - is found in the 31 municipalities lining the valleys around Scranton and Wilkes-Barre.

Perhaps as important as the 73,000 manufacturing jobs located in this economic activity area is the concentration of wealth, talent, and community resources. Size alone brings with it new functions in communities ranging all the way from the support of specialists in business services to specialists in medical practice. Jobbing, wholesaling, and distribution rise in importance, giving an area's activities a long reach into other communities - a fact well illustrated by the Scranton/Wilkes-Barre economic activity area which accounts for three-quarters of the wholesaling in the District. This role undoubtedly will increase as the Interstate highways planned for the District are completed.

In this highly compact economic activity area that covers approximately 192 square miles, Scranton and Wilkes-Barre are the recognized leaders as they have been for over a century. Both Cities developed as centers of anthracite mining and railroading as the canoe-shaped Northern Anthracite Field that extends from Carbondale to Nanticoke was mined of 4.6 billion tons of coal. Each hit its population peak in 1930 before anthracite mining fell into a steep slump. Scranton hit 143,000 population, but began falling rapidly down to

111,000 by 1960. Its 1965 estimated population - 105,000 - was almost the same number of people it contained at the turn of the Century. Wilkes-Barre's 1930 population was 86,600, which it maintained for a decade before losses began. By 1960, it was down to 63,000, and by 1965 there was a further decline of 2,000.

The combined populations of these two cities - 166,000 - is only about a third of the 510,000 total for the Scranton/Wilkes-Barre economic activity area, but the influence of these two cities extends throughout and beyond the Wyoming and Lackawanna Valleys. In other Districts, Kingston's 20,000 people would constitute a distinctive center; the same could be said for Dunmore, Scranton's neighbor with an 18,000 population, or Nanticoke (15,000), Carbondale (13,000), and several other important communities.

It would be false to conclude that these are suburban communities which have grown on the edges of the larger cities since World War II as has been the case in so many American metropolitan centers. On the contrary, these and other communities in the Wyoming and Lackawanna Valleys date back to the early 19th Century and grew up with anthracite mining as did their larger neighbors. Not only are they old mining communities, but they are manufacturing communities as well. Even the smallest of them with population of three or four thousand typically have ten to fifteen manufacturers together employing over five hundred people. And the largest of these often overlooked communities have several thousand employed in local factories.

To a visitor unfamiliar with governmental boundaries, there is a pattern of urban development that suggests a single large community with two downtown centers. Indeed, District officials believe that in the future Lackawanna and Luzerne Counties may be combined into one Standard Metropolitan Statistical Area because of the artificiality that results in separating communities among which there is so much economic interaction.

Even if community boundaries are not distinctive, there have long been rivalries that have emphasized the parts instead of the entire area. Jealousies that seem to occur among municipalities have had to be overcome by patient officials seeking means of pooling efforts and cooperating. Seldom have they had the opportunity to see themselves as a single large social and economic unit, a unit with a population larger than many of the other local development districts in the State. This long valley city and its immediate hinterland has a population larger than all of the other Standard Metropolitan Statistical Areas in the State except Philadelphia and Pittsburgh, and therefore it is a market capable of self-regeneration, of pushing itself forward.

A quick measure employed by market analysts to determine the importance of prospective markets is the size of the metropolitan population because it is believed to reflect economic boundaries better than mere city populations. Yet in the Scranton/Wilkes-Barre economic activity area there is no adequate measure of the real market population, and this simple fact about statistical reporting gives researchers the impression of a population about half its actual size. And unfortunately, once such statistics are published, there is no simple means of correcting the impression they convey.

Were the 510,000 people in this continuous urban area considered to be a single market, they would rank about 40th in the Nation in terms of effective buying income and retail sales and therefore be considered a prime market. Instead, the area is now ranked by Scranton's population, buying power, and retail sales because it is the largest single unit, and its population is but 150th in the Nation. The many small political units obscure the larger economic unit.

The larger economic unit is, however, the overriding fact about this economic activity area. If rivalries among city halls and fire companies catch the headlines, patient cooperation of development officials, bankers, managers, and labor leaders as often goes unsung. That cooperation was responsible for an industrial development program that has been a leader in the Nation. During the 1956-1967 period, it has brought to the area 356 new firms with an estimated employment of 32,609.

Much of the recent new employment in the economic activity area is concentrated in the six industrial parks which already have 27 tenants. The 1,700 acres of these parks that have been developed exclusively for the use of new industries are one of the key attractions development officials have offered industrial prospects. In the last three years, observers have reported that development efforts in progress for at least two decades are at last producing jobs in the quantities needed. Since 1965 alone, twenty-nine new and expanded plants with employment in excess of 8,000 were announced in the Scranton/Wilkes-Barre economic activity area.

Ten of these plants will produce apparel, footwear, textiles, and tobacco products - industries in which District employment is heavily concentrated. But in addition, the other 19 promise diversification of employment by bringing jobs in electrical machinery, optical glass, paper, steel fabrication, and aircraft instruments. Television tube manufacturing is expected to employ over a quarter of the new job total in two new plants.

Even so, the Scranton/Wilkes-Barre area's economic base is today still heavily influenced by its past. Coal and railroading employment, to be sure, no longer figure prominently, having left only the physical evidences of their past importance. Apparel manufacturers moved into the area and employed the women. As the mines closed, this became the major source of factory jobs and remains so today as 35 percent of all manufacturing jobs are in this single industry.

No other manufacturing industry approaches the importance of apparel in the economy of the Scranton/Wilkes-Barre area. Instead, nine others - food processing, fabricated metals, electrical machinery, leather, tobacco, printing and publishing, paper, textiles, and non-electrical machinery - have from 7 to 4 percent of the jobs. Most plants are relatively small employers - none has more than two thousand jobs - so that despite the heavy concentration of workers in the apparel industry, no single employer dominates the area as was true in the days of coal mining and railroading.

This healthy diversification is offset, however, by the concentration of low wage paying industries in the manufacturing sector. Almost three-fifths of the area's 73,000 factory jobs are in industries which typically pay low wages; about a third fall into the medium wage range, leaving about 5 percent in the high wage category.

This wage structure contrasts vividly with many other Appalachia Pennsylvania local development districts where a third or more of manufacturing jobs pay high wage rates and only a quarter of the jobs are in low wage paying industries. The presence of so many jobs in the apparel industry, where the majority of workers are women and wage rates are low, is a large part of the explanation. As a result, many of the cities of the Lackawanna and Wyoming Valleys have high proportions of females in the manufacturing labor force. Even the lowest - Scranton, where 38 percent of the manufacturing workers are women - far exceeds the 25 percent average for Appalachia Pennsylvania. Wilkes-Barre has 48 percent. The proportions for other major communities in the District range from 41 percent in Dunmore to 78 percent in Pittston; in Kingston the proportion is 44 percent, in Carbondale 50, Plymouth 61, and Nanticoke 75.

Factory jobs for men, though they have not yet achieved the same proportion as in the Northeast or Turnpike Districts where steel has played such a dominant role, have been increasing in the past few years as manpower training and industrial diversification efforts have concentrated on changing the dominance of female employing industries. Non-manufacturing sectors have also become sources of new jobs for those displaced from anthracite mines. The leading sources of non-manufacturing employment in the Scranton/Wilkes-Barre economic activity area are those typically associated with urban centers serving a large region - wholesale and retail trade, services, government, and transportation, communications, and public utilities. These industry groups provide about 7,000 more jobs than manufacturing and are prime sources of employment for men.

A transportation consultant working for both Lackawanna and Luzerne Counties noted in this connection many development activities that reveal the buoyancy of investors toward the area. Many new investments are in non-manufacturing sectors. These include a large suburban department store, a 700-unit apartment development nearby, two other, smaller apartment complexes, two large motels, and a sixty acre shopping center - all near Scranton. In Wilkes-Barre, a downtown complex of apartments, commercial buildings, and a civic center has been announced. A trailer plant, a glass plant, and a 2,000 acre industrial park have just been started nearby.

And several public projects - low income housing in at least five communities, two additional state parks and two county parks in Luzerne County, and expansion of the facilities at the Wilkes-Barre/Scranton Airport to accommodate jet service - are recent investments also noted by the consultant.

HAZLETON, the District's second largest economic activity area, is twenty miles south of Wilkes-Barre in Luzerne County. Nescopeck and Penobscot Mountains lie between the two cities. They created transportation barriers that have now largely been eliminated by construction of I-81.

Hazleton has grown by itself as a center of its own rather than along with adjoining communities as was the case in the Wyoming and Lackawanna Valleys. Like them, however, it developed originally as an anthracite mining community lying in the Eastern Middle Field and hit its population peak of 38,000 in 1940. Since then, the City's population has decreased to 32,000, although there has been constant development in the urban fringe which is estimated to contain 20,000 people. Approximately 21,000 people live in the hinterland served by the Hazleton economic activity center. The Hazleton economic activity area includes about 8 percent of the District's population. Hazleton, lying at an elevation of 1,800 feet, has the distinction of being Pennsylvania's highest city. Like the Scranton/Wilkes-Barre economic activity area, the Hazleton area is highly urbanized, with 70 percent of the population living in and around Hazleton. Much of the explanation for this urban character derives from the mining history of the area, but today the image of mining is largely irrelevant. Symbolic of the change is the 835 acre Valmont Industrial Park on the western edge of Hazleton in which 14 new industries with approximately 2,340 new employees have already located. Another five plants with 500 expected employees are committed to a new section of the park.

Industries that have been attracted to Hazleton are bringing a healthy diversity of employment opportunities, altering the past dependence on apparel manufacturing which developed alongside mining employment. At the end of 1966, apparel was still dominant in Hazleton with 31 percent of all manufacturing jobs. Many jobs that have been developed since 1965 are in fabricated metals, paper, electrical machinery, transportation equipment, and similar industries. At the end of 1966, other industries, in order of importance, were non-electrical machinery, textiles, electrical machinery, chemicals, food processing, and primary metals.

Significantly, 62 percent of the 12,612 manufacturing jobs in the Hazleton economic activity center were held by women in 1966 indicating that the tradition of female factory workers, a characteristic inherited from mining days, still lingers.

Estimates of non-manufacturing employment for Hazleton are included in those prepared for the labor market area that covers all of Luzerne County. Therefore, there is no way of determining how many or what kinds of non-manufacturing jobs may be developing now in the Hazleton area to afford employment for men.

SHAMOKIN-SHENANDOAH is an economic activity area which lies in the series of valleys between Little and Mahanoy Mountains in Northumberland, Columbia, and Schuylkill Counties. The major centers include Shamokin, Mount Carmel, Ashland, Frackville, Mahanoy City, and Shenandoah. Its geographic location was dictated by the location of anthracite deposits. These communitie and many smaller villages developed as the mines of the Western Middle Field created the economic basis of the area.

Today the population of the Shamokin-Shenandoah economic activity are is approximately 96,000, but less than half of this total lies in the Northeast District. An estimated 51,000 people reside in Northumberland and Columbia Counties, in and around Shamokin, Mount Carmel, and Centralia, which are in the Central Susquehanna Basin Local Development District.

Movement through the valleys along routes Pa. 54 and Pa. 61 created economic ties that continue today. Both the Reading and Pennsylvania Railroads established service to the mines and for many years provided these communities with public transportation service linking their people and their businesses.

Unlike their neighbors to the northeast around Scranton and Wilkes-Barre, the miners in the Western Middle Field have not had quite as good mining conditions as those existing in the Northern and Eastern Middle Fields. Consequently, during the heyday of anthracite production, the heaviest mining occurred where the deposits were easiest and cheapest to mine, and this technical fact accounts largely for the lack of growth in the Shamokin-Shenandoah economic activity area since 1920.

Indeed, of the six centers in this economic activity area, two of them - Shenandoah and Mahanoy City - reached their greatest populations in 1910. Shenandoah's 25,774 population in that year was the greatest achieved by any of these communities. By 1960, it had declined to 11,000. Mahanoy City experienced a similar decline. Its 15,600 peak population had shrunk to 8,536 in 1960.

Shamokin reported its largest population in 1920 - 21,200 - which was down to 13,674 in 1960. (An intercensal estimate by the State Planning Board for selected cities indicated that it had further declined to 10,600 by 1965.) Mount Carmel and Ashland had their largest population in 1930, and they too experienced large declines: Mount Carmel dropped from 17,967 to 10,760 in 1960; Ashland went from 7,164 down to 5,000 in the same period.

Only Frackville reached its greatest population in 1940 (and then only one person more than its 1930 total). It dropped from 8,035 to 5,651 in 1960 in keeping with the experience of its neighbors.

The role of coal was clearly dominant; everything else was subordinate. Unfortunately, the population was spread out over twenty-five miles so that one large urban center did not develop instead of the six that exist today. This fact, as much as any other, has made the transition from mining to manufacturing difficult. The highly developed infrastructure of social, political, economic, educational, and medical institutions that is created in large cities makes the transition easier because it is a ready reservoir of talent and resources that can be used.

For smaller cities, however, the changes that are well advanced in the Scranton/Wilkes-Barre economic activity area are only beginning. Most of the Shamokin-Shenandoah economic activity area remains heavily dependent on the apparel industry. Shamokin has eleven plants with 2,500 jobs - two-thirds of the City's manufacturing employment. Mount Carmel's eight apparel plants account for 70 percent of that community's 1,300 manufacturing jobs. Ashland has the smallest proportion, but even so, half of its 620 jobs are in apparel. Next is Mahanoy City, where apparel constitutes 62 percent of 1,445 production jobs. In Shenandoah, four out of five jobs are in apparel, while in Frackville five out of six jobs are.

A high proportion of female employees naturally results from this heavy incidence of apparel manufacturing. Here the range among the economic activity area's communities is not as wide as the range in the proportion of apparel jobs. The smallest proportion of female factory workers is in Shamokin where two-thirds are women, while both Mount Carmel and Shenandoah have 83 percent. In between are Ashland (70 percent), Mahanoy City (74 percent), and Frackville (75 percent).

Widespread efforts are underway to correct this imbalance. Industrial parks in Shamokin, Shenandoah, and Frackville have been established to meet the needs of prospective new industries, and in the past year a new plastics plant and two other existing plants have expanded employment by 350. Additional efforts to restore the landscape scarred by past mining are also considered important in the general effort to attract new jobs to the area.

POTTSVILLE is an economic activity area in Schuylkill County at the southern edge of the Southern Field where some of the earliest anthracite mining occurred. The Schuylkill Canal was opened from Philadelphia in 1825 for coal traffic, and by 1850 Pottsville was the largest city in the District with a population of 7,500.

Mining was the early basis for the economy. Although the anthracite deposits of the Southern Field are generally thicker than in the other three fields, they are deeper, have been subjected to intense folding and faulting, and are therefore more difficult to mine. Soon Pottsville lost its leadership to Scranton and Wilkes-Barre where conditions were more favorable for underground mining. Today, however, the frequent outcrops of the Southern Field lend themselves to stripping.

The Pottsville economic activity area includes Pottsville and three other activity centers - Minersville, population 6,600; Schuylkill Haven, 6,500; and St. Clair, 5,200. Pottsville itself achieved its largest population, 24,530, in 1940, and was estimated to have 23,000 in 1965, reflecting relatively greater stability than most other cities in the anthracite fields.

In all, these activity centers and their urban fringes are estimated to have 57,000 people and an additional 13,000 are thought to live in the hinterland served by the businesses, social, educational, and medical institutions in the activity center. Thus, four-fifths of the population is urban.

Employment patterns here are similar to those in the other mining communities in the District. In Pottsville, apparel accounts for three-fifths of 3,000 manufacturing jobs; 90 percent of the 968 jobs in Minersville factories; 85 percent of those in St. Clair. In Schuylkill Haven, only a tenth of all jobs are in apparel; 47 percent are in textiles. The effect on employment patterns by sex is also much the same as seen in the District's other activity centers: female production workers are a substantial majority. In Pottsville, three-fifths of factory workers are women; 62 percent in Schuylkill Haven; 77 percent in St. Clair; 82 percent in Minersville.

Two industrial parks sponsored by the Greater Pottsville Industrial Development Corporation have been established to create more diversified employment opportunities and have attracted four businesses. In the past three years, their efforts have proved more rewarding by attracting three new plants with 800 jobs and expanding three others employing 320 more. None of these plants was in the apparel or textiles categories. Instead they produce wire, bearings, electrical equipment, and paper boxes.

TAMAQUA-PALMERTON is an economic activity area at the eastern end of the Southern Field above Blue Mountain. Like the Pottsville area, it was opened by a canal constructed to carry anthracite to Philadelphia in 1829, but in contrast, a major terminus at the canal's end did not become one of the District's important cities. The reason probably lies in the fact that the canal's builder, Josiah White, incorporated an ingenious switchback railroad into the transportation system, thereby shifting the center of business farther into mining country. Whatever the explanation, the economic activity area includes seven centers of four to ten thousand people in size with a 42,600 total population.

The largest of them is Tamaqua (10,173 in 1960) at the western end of the economic activity area. It lies in a deep ravine along the Little Schuylkill River but was early connected to its eastern neighbors - Coaldale, Lansford, and Summit Hill - which drew coal down the Lehigh Canal. These neighbors have suffered some losses of population in recent years, as did Tamaqua, because of the decline in mining. Tamaqua lost 1,500 in the 1950-60 decade; Coaldale lost 1,400 during the same period bringing it down to 3,900; Lansford lost 1,500, dropping it to 5,900. Summit Hill, the terminus of the switchback railroad, declined from 4,900 to 4,400.

On the Lehigh River, Mauch Chunk, now renamed Jim Thorpe, has a 5,900 population. Two boroughs and part of a township were consolidated at the same time it was renamed, so comparisons with past populations are difficult to make. Down the River are Lehighton and Palmerton, about the same size as Jim Thorpe, which have experienced smaller population losses than their neighbors over the Mauch Chunk Ridge. Palmerton lost 700 people dropping to 5,900, while Lehighton lost only 250.

The urban areas surrounding these communities have tended to grow as the older central communities lost population. An estimated 12,000 people live in these adjacent urban fringe areas, while only about 4,100 are thought to live in the rural hinterland that depends on these communities for urban services. About 93 percent of the people live in or adjacent to the urban centers in this economic activity area.

While the road network and commercial relations between these communities appear to link them together into a single economic activity area, they are not all former anthracite mining communities. Tamaqua, Coaldale, Lansford, and Summit Hill thrived on mining, but the communities on the Lehigh River developed for other reasons. Palmerton became one of the leading zinc smelting centers in the eastern United States. Textile mills became important to Mauch Chunk and Lehighton, but have been superseded by apparel.

With the decline of mining in the western portion of this activity area and the loss of textile employment in the eastern portion as mills moved south, the two sections are becoming economically more similar. The proportions of manufacturing employment in apparel are 84 percent for Tamaqua, 100 percent for Coaldale, 80 percent for Lansford, 84 percent for Summit Hill, 35 percent for Jim Thorpe, 58 percent for Lehighton, and 29 percent for Palmerton. The Palmerton zinc plant with 1,781 employees is the largest single employer and stands out in stark relief against the many small factories employing less than 100 people that exist elsewhere in the economic activity area.

It also makes Palmerton distinctive since it employs few women. Only

28 percent of factory workers in that community are female compared with 79 percent in Tamaqua, 92 percent in Coaldale, 76 percent in Lansford, 70 percent in Summit Hill, 63 percent in Lehighton, and 60 percent in Jim Thorpe.

As with other former mining communities, diligent campaigns are being conducted to attract new and diverse sources of jobs. In Tamaqua, two new plants and two expanded plants have brought over 800 new jobs in chemicals, building fabrication, primary metals, and textiles. Lansford brought in a packaging materials factory that will employ 100 people.

STROUDSBURG is an economic activity area in eastern Monroe County centered on Stroudsburg and East Stroudsburg which lie just northwest of the Delaware Water Gap, a long-time tourist attraction of eastern Pennsylvania. That location speaks much for the nature of this economic area which has been a gateway to the Poconos from New York and Philadelphia since before the days of railroads.

There was no natural resource base for the Stroudsburg economy compared to the resources associated with the mining, steel making, cement manufacture, or clay products production typical in other parts of Appalachia Pennsylvania, and as a consequence the industrial revolution left this area in Monroe County largely unaffected by development. Today conditions are changed; yesterday's natural resources elsewhere have declined greatly in significance and yesterday's unproductive, rocky hills have become suddenly very valuable when found in a beautiful setting.

Beauty has thus become the natural resource at the base of an expanding Stroudsburg economy. In contrast to the economic activity centers in the western part of the Northeast District which were booming by 1910 or 1920 and have been losing population since, Stroudsburg and East Stroudsburg have been showing steady, if modest, increases. Combined, they had 13,700 inhabitants in 1960, and an urban fringe of approximately 5,300; this 19,000 urban center served a hinterland in Pennsylvania with approximately 15,500 more people.

In part, the people living in this hinterland are farm people, but because this is resort country there are also many vacation homes, tourist facilities, and other non-farm activities in the countryside. This gives the population the largest non-urban proportion of any of the District's activity areas - 45 percent.

There is an easy confidence about the future of the Stroudsburg economic activity area because the Tocks Island Dam is scheduled to be constructed nearby on the Delaware River. Around the reservoir the Delaware Water Gap National Recreation Area will be created to serve the populations of east coast cities where recreation space is currently in great demand.

In addition, the construction of I-80 of the Interstate highway system assures that recreation seekers will have quick and easy access from New York.

The current economic picture of the Stroudsburg economic activity area is considerably different from those areas where mining has been important. For one thing, apparel manufacture never took hold here as it did there; for another, the manufacturing base is both widely diversified and heavily weighted with employment for men who hold 73 percent of factory jobs. Leading sources of manufacturing employment are miscellaneous manufacturing, fabricated metals, printing, electrical machinery, and textiles.

But manufacturing is not the most important source of jobs - government is. Here the combined employment of East Stroudsburg State College and the Tobyhanna Army Depot have assumed a dominant employment role in addition to the new jobs associated with the Tocks Island Dam and the Delaware Water Gap National Recreation Area.

In Monroe County, government with 5,900 jobs and manufacturing with 5,200 are the largest employment categories based on annual averages, but services with a reported annual average of 5,100 jobs increases to about 7,800 in August at the height of the tourist season. There are corresponding slack periods during Winter months, highlighting the seasonal quality of many employment opportunities that will result from expanded recreational development.

Optimism in the Stroudsburg economic activity area is not based on recreational development alone, however. Rather there is the fact that Monroe County has had an effective industrial development program. In 1965, there were six expansions and two new plants resulting in 362 new jobs; in 1966, four new and four expanded plants for 457 more jobs; and in 1967, six new plants and four expansions producing 228 new positions. Some observers suggest that local development officials have succeeded in using the area's natural beauty and recreation assets to attract new employers.

HONESDALE is an economic activity area in central Wayne County comprised of Honesdale Borough with a 5,500 population and an urban fringe of approximately 1,400. The rural hinterland surrounding it has an estimated 4,500 people, bringing the total population of the economic activity area to 11,400, which is 1.3 percent of the Northeast District population.

Honesdale is the Wayne County seat and was once an important depot for anthracite coal being shipped from Carbondale to New York City. Before the end of the 19th Century it lost that role and became instead a small governmental, agricultural, and manufacturing center. Today over half of its 1,220 manufacturing jobs are in two apparel plants. Other leading industries are furniture, printing, and textiles. Half of the area's manufacturing workers are women.

Efforts to diversify the economy have been rewarded in the Honesdale area in the past two years during which a sporting equipment plant, a television tube manufacturer, and a printer of business forms have established 300 new jobs.

MATAMORAS-MILFORD, in Pike County, is the smallest economic activity area in the Northeast District with a total population of 5,000. This is made up of 1,200 people in Milford Borough, 2,000 in Matamoras Borough, 600 living in the urban fringes around these two communities, and another 1,200 living in the hinterland that depends on these communities for urban services.

Both Matamoras and Milford are located on the Delaware River and both should benefit by construction of I-84, the Interstate highway from Scranton to Connecticut. Matamoras is the larger of these two communities because it is satellite to Port Jervis, New York (1960 population 9,268) where many residents of the economic activity area are employed.

Manufacturing employment in the economic activity area is insignificant, accounting for less than a hundred workers. There is some service employment here, however. In the Matamoras-Milford labor market area the average annual employment in services in 1967 was 2,500 but it almost doubled during August reflecting both the seasonal nature of many job opportunities and the fact that this area, like the Stroudsburg economic activity area, is tourist country.

In the last two years, both Matamoras and Milford have added small apparel factories to their communities, but local officials see a greater potential for economic improvement resulting from construction of the Tocks Island Dam and the Delaware Water Gap National Recreation Area which will extend north almost to Milford.

THE PEOPLE

The economic renaissance occurring in the Northeast Local Development District has grown from economic necessity but has been possible only because many people of the District were willing to accept change. Normally, young people are considered the most willing to see changes, but in the Northeast District young and old were affected by the ailing anthracite industry. Many young people left the District, so that by 1960, the District's population profile was much different from that of the rest of Pennsylvania.

There were fewer young people and more older people, just exactly opposite from the population composition most conducive to change. In the 20-44 age group, all of the Northeast District's counties had a smaller proportion of people than was true for the State. Since this is the age group with most child bearing women, a decline in numbers here also affects the number of children in the population. Of all the 67 Pennsylvania counties, only 18 had smaller proportions in the 0-19 age group than the State proportion, but all of the Northeast District's counties were in this group. In fact, Pike and Schuylkill were at the very bottom of the list, Luzerne and Lackawanna were fourth and fifth, Carbon was eighth, Wayne was tenth, and Monroe twelfth.

At the other end of the age spectrum, Pike had the highest proportion of people over age 65 of all counties in the State. Wayne was next. Lackawanna and Carbon ranked twelfth and thirteenth, Schuylkill nineteenth, Luzerne twenty-third, and Monroe twenty-sixth.

With this higher than average age population, changes in the District's economy meant hardship for older people whose skills developed over decades become obsolete.

The 1960 figures actually repeated those of earlier censuses which also showed an aging population as a result of migration. This pattern of people leaving was noted in the descriptions of many of the economic activity centers which began losing population in 1910, 1920, or 1930 as the anthracite industry began slipping.

TABLE 42

NORTHEAST DISTRICT POPULATION CHANGES 1929-1963

County	Percent Change
Carbon	- 17
Lackawanna	- 28
Luzerne	- 23
Monroe	+ 55
Pike	+ 25
Schuylkill	- 28
Wayne	-

Source: Pennsylvania Department of Internal Affairs.

The total migration was, of course, a much larger proportion of the 1929 figure when natural increase for this period was considered. In the 1950-60 period alone, the migration loss (which includes natural increase) came to 155,330, or 16 percent of the 1950 population.

Migration is most often simply a demographic expression of economic conditions - usually adverse conditions - and in the Northeast District declining mining and railroading activities were the major causes of departure. At least the decline in general economic activity brought on by widespread unployment prompted people in many businesses to seek employment elsewhere where conditions were more favorable. Hence, migration patterns can be taken as an indicator of economic health.

The losses came in the counties with the most people - the counties where there had been the most mining employment. As the table below shows, Lackawanna, Luzerne, and Schuylkill Counties lost more people in the fifties than lived in the Northern Tier District in 1965. State Planning Board estimates suggest that since 1960 the rates of leaving have dropped greatly and that they have been reversed in some cases. By 1975, in-migration is expected to be the rule.

TABLE 43

NORTHEAST DISTRICT GAINS AND LOSSES FROM MIGRATION

County	1950-1960	1960-1965	1965-1975
Carbon	- 8,791	+ 131	+ 2,100
Lackawanna	- 39,201	- 12,012	+ 12,800
Luzerne	- 69,181	- 6,745	+ 23,400
Monroe	+ 2,411	+ 2,083	+ 18,300
Pike	+ 444	+ 628	+ 2,700
Schuylkill	- 38,731	- 934	- 3,600
Wayne	- 2,281	+ 1,105	+ 5,100
	-155,330	- 15,744	+ 60,800

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates and projections.

The reversal of trends - always a somewhat daring prediction - is more fully explained in the following section which discusses employment because in this Plan report future population is predicted on the basis of future employment expectations. The near static 1960-65 population level (there was a decrease of .15 percent) is expected to give way to a 9.7 percent increase in the 1965-75 period. These increases will be most pronounced in the eastern counties so far as rates are concerned, but Lackawanna and Luzerne Counties, with 65 percent of the District population, are expected to show the greatest absolute gains.

TABLE 44

NORTHEAST DISTRICT POPULATION SUMMARY

County	1950	1960	1965	1975
Carbon	57,588	52,889	54,000	57,400
Lackawanna	257,369	234,531	226,000	243,500
Luzerne	392,241	346,972	346,000	377,100
Monroe	33,773	39,567	43,300	63,800
Pike	8,425	9,158	9,800	12,500
Schuylkill	200,577	173,027	174,000	173,000
Wayne	28,478	28,237	30,000	36,000
	978,451	884,381	883,100	963,300

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates and projections.

These are the counties where the losses have been most crucial, and where the reversal of past trends has the deepest social and economic significance. During the fifties, for example, a third of the people lost through migration from these two counties were 20-29 years old, those young people just entering on lifetime careers who showed their lack of confidence in the area by moving elsewhere. While this is far from an unusual pattern in Appalachian counties where migration has been the rule, the reversal of that trend suggests not only enough confidence to hold future young adults, but enough to bring in others from elsewhere.

that total agricultural and wage and salary employment increased by 15,700 jobs during the 1960-65 period and is projected to increase by 43,800 jobs between 1965 and 1975.

A number of analyses of the Northeast District economy have been made recently to identify strengths and weaknesses and to evolve a development strategy for local development officials. One of the most useful tools is the differential shift analysis. It provides a means for comparing relative changes between two different areas.

One of the comparisons made was that between the performance of the Northeast District and the State of Pennsylvania for the 1960-65 period to determine whether the District maintained the State's growth rates. Had the District performed as well as the State between 1960 and 1965, total agricultural wage and salary employment would have increased by 19,710. Instead, the total gain in employment was only 15,700, which resulted in a relative shift downward of 4,010 jobs. This performance below the State average is attributable to two factors:

*79 percent of the shift (also called net relative change) is the result of the District's unfavorable industrial mix. That is, District employment was concentrated in industries that grew slowly or declined in Pennsylvania between 1960 and 1965.

*21 percent of the shift derived from the District's inability to compete effectively with the rest of the State for new employment growth. This applies both to less success in attracting new industries into the area and to obtaining less expansion of locally existing industries.

Mining, as might be anticipated, led the industries that contributed to the District's unfavorable industrial mix. The major contributors were:

Industry	Employment Change Related to Unfavorable Industrial Mix
Mining	- 4,290
Transportation, Communications, Public Utilities	- 2,280
Textiles	- 1,460
Agriculture	- 1,430
Tobacco	- 1,170

Net losses resulting from inability to compete effectively were significant in the following industries:

Industry	Employment Change Related to Unfavorable Competitive Effect
Trade	- 5,200
Services	- 1,870
Transportation, Communications, Public Utilities	- 1,540
Mining	- 1,380
Government	- 1,360

These losses more than offset increases in other industries that derived from the District's demonstrated ability to compete well with other areas for employment. Those industries in which the District excelled significantly during the 1960-65 period were:

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These losses more than offset increases in other industries that derived from the District's demonstrated ability to compete well with other areas for employment. Those industries in which the District excelled significantly during the 1960-65 period were:

Industry	Employment Change Related to Favorable Competitive Effect
Apparel	+ 2,500
Tobacco	+ 1,550
Fabricated Metals	+ 1,520
Electrical Machinery	+ 1,460
Chemical Products	+ 1,020
Lumber, Wood, Furniture	+ 1,000

To be sure, some of these changes have occurred in industries in which the District has a small number of people employed, so that even if relative growth is pronounced, it may amount to little in terms of overall employment. And still another factor besides size that is of concern to economic analysts is the rate of growth an industry is exhibiting. More total employment results if rapid growth industries are present in an area and shares in them are being increased than if an area is obtaining increasing shares in declining or slow growth industries. Hence, analysts look for evidence of high growth rates in fast growing industries.Among the major employers between 1960 and 1965, the District performed better than the State average only in two rapid growth industries - apparel and construction. In one slow growth industry - electrical machinery - it exceeded the State growth rate, and in two declining industries - textiles and fabricated metals - it also exceeded the State growth rates.

Ideally, a district could hope to enjoy above average growth in its largest industries so that expanded job opportunities in the future would come about almost automatically. In most of Appalachia, that ideal is often the

TABLE 46

NORTHEAST DISTRICT INDUSTRIES EMPLOYING 6,500 OR MORE IN 1965

Industry Group	1965 Employment	State Growth Characteristic 1960-1965	District Growth Relative to the State
Apparel	49,600	rapid growth	above average
Trade	45,200	rapid growth	below average
Services	36,500	rapid growth	below average
Government	34,900	rapid growth	below average
Transportation, Communications, Public Utilities	15,800	declining	below average
Textiles	9,900	declining	above average
Construction	9,800	rapid growth	above average
Mining	8,800	declining	below average
Finance, Insurance, Real Estate	7,800	slow growth	below average
Food Products	7,500	declining	below average
Electrical Machinery	6,800	slow growth	above average
Fabricated Metals	6,500	declining	above average

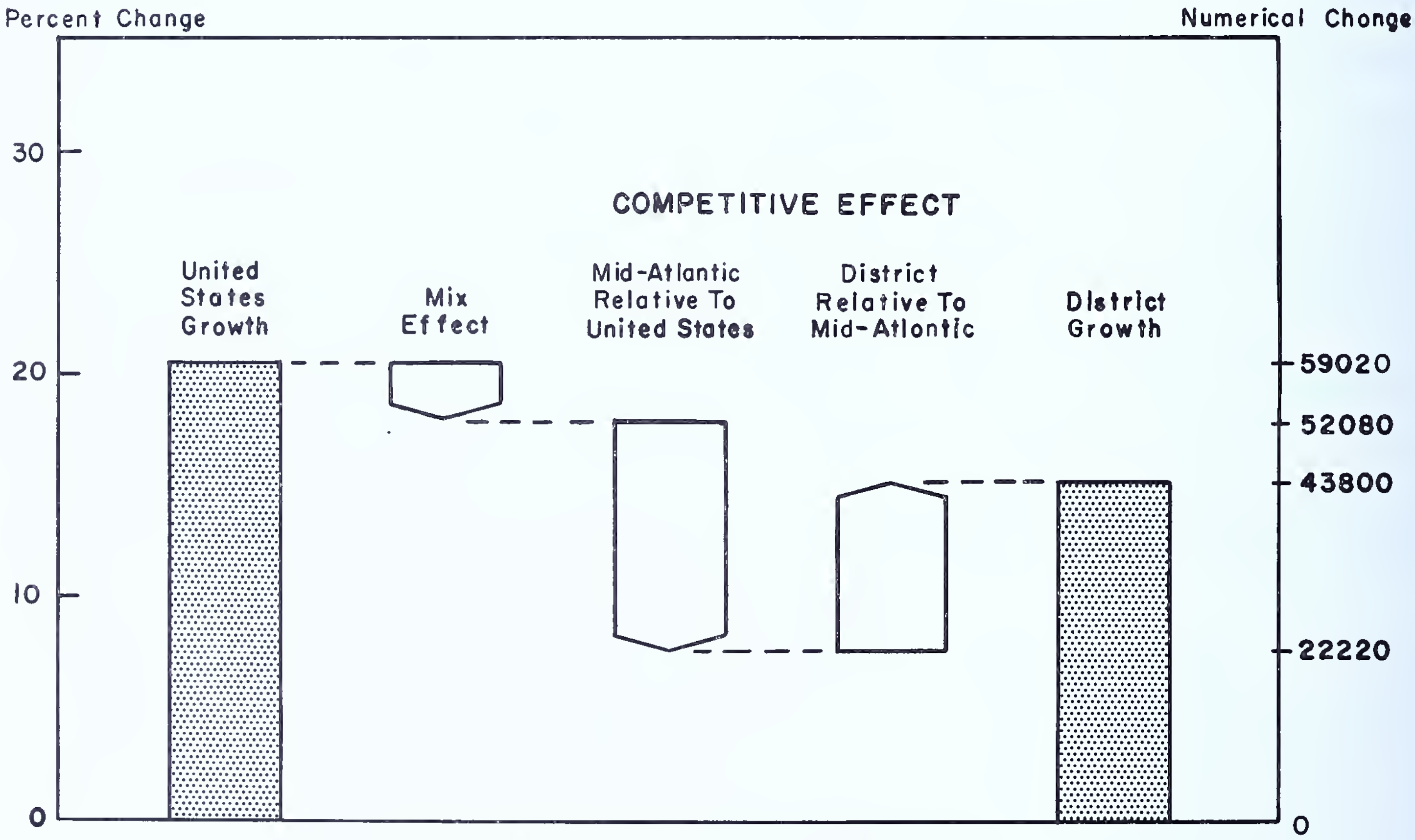
Source: Pennsylvania State Planning Board.

opposite of reality since heaviest concentrations of jobs have been in industries where the outlook is bleakest or at the most, not very promising. Thus, a long-term goal in many areas is a change in the industrial mix from one with many jobs concentrated in slow growth and declining industries to an economy with many rapid growth industries supplying most of the jobs.

Most economic forecasts begin with a projection of national performance, and since Northeastern Pennsylvania is competing within this total economy, its relative standing is important to understand. Because the national figures obscure whether the keenest competition is nearby or remotely distant, the competitive effect of the Middle Atlantic States was introduced. This nearby area is actually a more important source of competition to Northeast Pennsylvania than is the total Nation, so it is probably more important to know how well the District is competing with it than with some distant State such as California or Texas.

CHART 14

COMPONENTS OF EMPLOYMENT CHANGE NORTHEAST DISTRICT 1965 TO 1975



Source: Pennsylvania State Planning Board

Using State Planning Board projections (as modified by the staff of the Economic Development Council of Northeastern Pennsylvania) for the District and National Planning Association projections for the Nation and the Middle Atlantic States, a shift analysis was made of agricultural and wage and salary employment. It showed that if the Northeast District were to perform at national rates during the 1965-75 period, employment would increase by 59,020 jobs. Instead, the total projected gain is 43,800, which amounts to a relative downward shift of 15,220 jobs. This below average performance is attributable to two factors:

*54 percent derives from the District's inability to compete successfully with other areas for new jobs, and

*46 percent derives from the District's adverse industrial mix in which slow growth and declining industries are dominant.

Among the slow growth and declining industries which give the District this poor industrial mix, those accounting for the largest downward shifts are expected to be:

Industry	Employment Change Related to Unfavorable Industrial Mix
Apparel	- 5,370
Mining	- 3,430
Agriculture	- 3,260
Trade	- 2,770
Textiles	- 2,440
Transportation, Communications, Public Utilities	- 2,050
Food	- 1,560
Tobacco	- 1,510
Leather	- 1,300

Partially offsetting the poor growth of these industries are civilian government (9,720 jobs), services (4,570), and electrical machinery (2,180), which are expected to grow at rates faster than the national average. These categories are significant sources of jobs in the Northeast District.

The industrial mix in an area usually evolves slowly, so despite the ideal of having most employment concentrated in rapid growth industries, it is next to impossible to switch suddenly from slow growth to rapid growth industries. Instead, most development strategists concentrate on competitive factors to enhance the economy of an area.

In this respect, the Northeast District is not expected to gain shares of employment in existing industries as fast as the Nation is expected to grow in those industries, but it is expected to exceed the growth of the Middle Atlantic States. The significance is less that the District is expected not to compete well with the rest of the Nation than that it is expected to do much better than the Middle Atlantic States. If the District were to compete only as well as the Middle Atlantic States, it would experience a downward shift of 29,860 jobs during the 1965-75 period. Instead its relative loss of jobs is expected to be 8,280. Thus the District would experience an upward shift of 21,580 jobs relative to the Middle Atlantic States.

Major contributors to this competitive advantage of the Northeast District over the Middle Atlantic States are:

Industry	Employment Change Related to Favorable Competitive Effect
Trade	+ 6,000
Apparel	+ 4,030
Services	+ 3,120

Industry	Employment Change Related to Favorable Competitive Effect
Electrical Machinery	+ 2,390
Printing and Publishing	+ 2,300
Non-electrical Machinery	+ 2,080
Contract Construction	+ 1,970

These are the industries in which the District is expected to gain significant shares of employment relative to the Middle Atlantic States. Since this is the area with which the District is in keenest competition, these gains are indeed significant. While the employment projections are not self-fulfilling and these relative gains are not automatic, they point to the sources of employment where the District's prospects are brightest and suggest industries on which development efforts can be profitably concentrated.

To be sure, not all of these are rapid growth industries nationally. Hence, employment expansion in them does not necessarily insure continued growth. Indeed, retail and wholesale trade, projected to be the District's largest industry in 1975, is expected to be a slow growth industry nationally.

Of the District's seven industry groups expected to employ over 10,000 by 1975, four are in the rapid growth category and three are slow growth; in three rapid growth groups and one slow growth group, the District is expected to out-perform the Nation.

This latter fact - that the District projection is for faster growth than is expected in the Nation - may be somewhat speculative. Retail and wholesale trade, for example, increased only 900 jobs between 1960 and 1965 while the 1965-75 increase projected is 7,900. Thus the rate is expected to jump from 180 new jobs annually to 790, over four times the 1960-65 growth rate.

TABLE 47

NORTHEAST DISTRICT INDUSTRIES EMPLOYING 10,000 OR MORE IN 1975

Industry Group	1975 Employment	National Growth Characteristic	District Performance Expectation 1965-75 relative to: Mid-Atlantic	United States
Trade	53,100	slow growth	above average	above average
Services	49,100	rapid growth	above average	above average
Apparel	48,300	slow growth	above average	below average
Government	44,100	rapid growth	below average	below average
Transportation, Communications, Public Utilities	16,400	slow growth	above average	below average
Construction	13,600	rapid growth	above average	above average
Electrical Machinery	11,200	rapid growth	above average	above average

Source: Pennsylvania State Planning Board.

The basis for this acceleration in an industry predicted to grow slower than the national all-industry growth rate is the new highway network under construction which will give the area great appeal as a distribution center. Most disinterested observers agree that these new highways will have a deep impact on the District's economy, so this estimate of future employment in trade may be optimistic but not unreasonable.

Similarly, predicted growth in service employment, a rapid growth industry nationally, is expected to exceed national rates in the Northeast District. Service employment grew 2,800 from 1960 to 1965, and is expected to grow 12,600 during the 1965-75 decade. Here again the annual growth is projected to accelerate - from 560 per year to 1,260. District officials have noted in the past that service employment in the District was disproportionately low in comparison to other areas of similar size. Now that the structure of the District's economy is changing to more closely resemble other areas, the proportion of service employment will expand. A factor that may slow this projected growth of service employment is lower per capita personal income in the District than in the State or the Nation. As was mentioned in Manpower Dilemma In Northeast Pennsylvania, "per capita personal income in Northeastern Pennsylvania has been between $400 and $500 less than per capita income in the State or in the Nation. This lower level of income per individual has contributed to the lag in the growth of the service industry within the Northeast District."

The increase of contract construction employment at a rate faster than the national growth rate is somewhat more easily explained especially since the annual rate is expected to increase by only 40 jobs per year. Construction of the Tocks Island Dam on the Delaware River alone could account for this much increase.

Electrical machinery, the last of the four major industry groups in which the District is expected to exceed national growth rates, is expected to increase from the 300 new jobs annually it experienced during the 1960-65 period to 440 annually during the 1965-75 decade. While optimistic, recent plant additions have already put the District ahead of that rate for the years since 1965.

Fortunately, much study and research of the Northeast District by local officials preceded this analysis and explains what otherwise might be considered overly optimistic employment projections. One of the most perceptive studies was the Overall Economic Development Program prepared by the Economic Development Council of Northeastern Pennsylvania which showed some specific handicaps that must be overcome. They include:

*heavy concentration (almost 40 percent) of employment in apparel manufacturing;

*more than half of the manufacturing labor force is women;

*average take-home pay of manufacturing workers in the District is about $1,500 less than the average for Pennsylvania;

*value added in manufacturing per employee in the Northeast District was $3,500 lower than for Pennsylvania and $5,000 lower than for the Nation; on an industry by industry basis, value added was lower for the District's largest employers - apparel, textiles, food products, electrical machinery, fabricated metals, leather products, printing and publishing, primary metals, and non-electrical machinery;

*the level of annual new capital expenditures per employee in manufacturing has been substantially lower than that for either the State or the Nation;

*average household effective buying income ranges from $1,000 to $1,700 below that of the Nation while the typical city worker's annual family budget is about the same as that in eastern seaboard cities.

This range of problems requires many solutions. In general, the District needs to attract more growth industries that pay high wages. To augment this selective industrial development program, the Economic Development Council of Northeastern Pennsylvania has proposed the establishment of a management consulting service to aid local businesses in solving technical and personnel problems. A third area of need is educational programs to insure that the District's labor force is qualified to fill the exacting requirements of industries with high capital/worker ratios and high wage rates.

MANPOWER TRAINING

The quality of the labor force is always of deep concern to development officials. In the Northeast District, that concern resulted in the publication of Manpower Dilemma, which reported that,

> "The District continues to suffer greatly from outmigration of its young, best-educated talent. This is related to the limited opportunities for college-trained middle-management people. In addition, job openings for highly skilled or professional people are limited.
>
> "Levels of educational attainment of those remaining with the District are far below normal. As a consequence, the District has a less versatile labor force."

Creation of more job opportunities for managerial, professional, and skilled workers through selective industrial development is one part of the answer to this problem. Those industries in which the District seems to have a competitive advantage over the rest of the Middle Atlantic States - transportation equipment, electrical machinery, non-electrical machinery, fabricated metals, trade, services, and contract construction - all suggest promising areas of emphasis although they are not all expected to be rapid growth industries.

One rapid growth industry in which the District is projected to perform poorly relative to both the Middle Atlantic States and the Nation is civilian government employment. This is an industry group which generally attracts professional and managerial workers in large numbers, and may therefore benefit through expanded training facilities in the District.

The District's seven private and five public colleges and branch campuses of universities supply a steady stream of graduates to fill many of these positions. However, some of the District's leading employers reported shortages of qualified job applicants at the technical level. A 1965 survey by the Economic Development Council revealed a number of skills in short supply and prompted the Council to call for "an inventory/evaluation study" of the many training efforts. A 1966 survey revealed several thousand jobs for which no applicants could be found.

Since those surveys were completed, two area vocational-technical schools with space for 1,372 pupils have opened - one in Luzerne County and the other in Carbon County - at a total cost of almost $5 million. Three more - two in Schuylkill County and one in Luzerne County - with a combined pupil capacity of 2,560 - are under construction. Four other schools - one for Wilkes-Barre, two for Lackawanna County, and another near Stroudsburg to serve Monroe County - are being planned. Local leaders in Pike County put vocational-technical education at the top of their list of needs and Wayne County leaders list vocational-technical education as that County's second greatest need, but no attendance area has yet been approved for either county by the Department of Public Instruction.

Before the establishment of vocational-technical schools, the District's manpower training problems were receiving aid through a variety of public and private programs. A private trade and industrial school in Scranton, business schools in Luzerne and Schuylkill Counties, and nursing schools in Lackawanna, Luzerne, and Schuylkill Counties augmented shop, home economics, and business courses in high schools of the District. For the waves of displaced miners lacking skills, both the State and Federal governments have been sponsoring manpower retraining programs teaching such skills as mechanical maintenance, general machine operation, welding, auto mechanics, and a variety of similar occupations. Since 1962, when the Federal Manpower Development and Training Act was passed, both State and Federal retraining programs have given courses to 2,235 people in the Northeast District. The larger classes have concentrated on the major occupational shortages such as those just named, while individuals have been given schooling where an individual opening was available. In other cases, on-the-job training has been supported through cooperation with employers.

This range of retraining interests highlights those categories in which skills are in shortest supply and the demand is greatest in the Northeast District. It does not reveal the amount of specialized training being given workers through employee training programs by private industry without public compensation nor training from other sources.

To date, however, it is clear that in the Northeast District as in most other sections of Appalachia Pennsylvania, manpower training programs are inadequate for the needs of local employers. The manpower surveys of 1965 and 1966 sponsored by the Economic Development Council emphasized this fact by revealing the many positions for which no qualified applicants could be found. They may well be the harbinger of an even tighter labor situation in the future if job opportunities expand according to the employment projections shown above.

Fortunately, an evaluation of manpower needs until 1975 is being conducted by the Department of Public Instruction to aid local training efforts. An important emphasis of this study will be new skills, so that tomorrow's labor force will be equipped for the evolving occupational skills of modern industry. Also important will be the identification of skills that are expected to decline in importance to help assure that by 1975 there will not be excess and idle workers - like the miners of the fifties.

NATURAL RESOURCES

Another estimate of the Northeast District's future concerns the role of natural resources - minerals, timber, and agriculture - that have had economic influence in the past. Clearly, occupational demands related to natural resources are declining and suggest little demand from tomorrow's labor force as overall numbers of employees decline. However, in natural resource use, as in so many other industries today, there is often a shortage of technically trained people at the same time those lacking skills are without employment. Mining - the industry that dropped 55,000 jobs during the fifties in the Northeast District alone - is reported to have a chronic shortage of mine-machine mechanics, and many other industries noted in the past for reliance on muscle now need scientists, engineers, and technicians to compete effectively.

To the Northeast District for over a century, mineral resources has meant anthracite coal. An estimated 5.3 billion tons of anthracite have been produced in Pennsylvania since 1820. This amounts to about a fifth of all the coal produced in Appalachia. From 1825, when the Schuylkill Canal opened, production for the domestic heating market of eastern seaboard cities constantly rose to a peak production of 99.6 million tons in 1917. Since then, production declined to a low of 16.9 million tons in 1962, which is about one percent of the coal mined in the Nation today.

The economics of the anthracite industry are influenced by two important factors - consumer preference for other fuels and rising mining costs. Despite the fact that anthracite is a cheaper fuel for domestic heating, today's consumers choose fuel oil, natural gas, and electricity to heat their homes because of their greater convenience. Until new markets can be developed, the outlook for anthracite is continued low production.

A part of developing new markets depends, of course, on keeping prices down, and it is in this respect that mining costs have become a burden to the industry. Much of the relatively flat coal has been mined, leaving steeply pitching underground seams which prohibit extensive use of mechanized equipment. This is the same coal passed over a century ago by mining companies because the coal of the Wyoming and Lackawanna Valleys was easier to mine.

Labor costs for underground mining have risen as mining conditions have become more difficult. Another cause of rising costs has been mine water control, sometimes requiring a thousand tons of water to be pumped from the mine for each ton of coal mined.

As mining costs have risen, open pit strip mining has been turned to as an alternative. Today most of the coal beds near the surface have been mined, so that strip mines must be dug deeper. The result is increased production costs.

With anthracite reduced to about 8 percent of the domestic heating market in its traditional market area, attention must be directed to other consumers. Electric utilities have consumed most of the reclaimed coal from culm banks and river dredging. This market has been declining in recent years and may cease to exist as these sources are exhausted.

Steel and cement industries have remained a steady, if small, market for anthracite producers - about a third of the utilities market. A glimmer of hope for increasing demand is in markets for sintering and pelletizing iron ore, for industrial carbon, and for various other metallurgical uses.

Generally, however, the outlook for anthracite is pessimistic. Other minerals are not now being produced in large quantities in the Northeast District although there are substantial deposits of sand and gravel in the sections of the District covered by glaciers during the two ice ages that affected Pennsylvania. Peat is another product found in the same areas.

These glacial deposits are also natural aquifers containing enormous quantities of untapped ground water which may well become one of the Northeast District's most valuable natural resources. Today, as in the past, the greatest share of mineral production comes from anthracite coal in all counties except Monroe and Wayne.

TABLE 48

1966 VALUE OF MINERAL PRODUCTION IN THE NORTHEAST DISTRICT

County	Value	*Minerals Produced in Order of Value
Carbon	$ 4,885,309	Coal, stone, sand and gravel, peat
Lackawanna	withheld	Coal, sand and gravel, peat
Luzerne	40,677,402	Coal, sand and gravel, stone, peat, clays
Monroe	771,072	Stone, clays, sand and gravel, peat
Pike	withheld	Stone, sand and gravel
Schuylkill	37,123,723	Coal, stone, sand and gravel, clays
Wayne	withheld	Stone, sand and gravel
Total	$90,993,000	

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*Excludes value of natural gas, natural gasoline, LP gases, petroleum, and gem stones.

Source: Pennsylvania Department of Internal Affairs, Topographic and Geologic Survey.

Other economic activity based on the District's natural endowments is not impressive. In agriculture, for example, the District accounted for 5.8 percent of the State's farm receipts while it contains 9.8 percent of the land area. This rough comparison suggests that there is a lack of fertile and productive land. Only in the production of vegetables and potatoes does the District appear to excel: it had 10.9 percent of the State's receipts in 1965, most of which was contributed by Luzerne and Schuylkill County farmers.

Among the District's counties, Wayne and Schuylkill are the agricultural leaders. Wayne's $14.4 million of farm receipts in 1965 was almost 30 percent of the District total, and Schuylkill's $12 million accounted for about a quarter of the seven-county total. In these two counties, as in the

District as a whole, the leading sources of revenue were dairy products and poultry. Wayne accounted for over half of the District's $20.8 million dairy production while Schuylkill farmers produced two-fifths of all the District's poultry products in 1965.

With the District's high level of urbanization, it is not surprising that vegetable and potato production should be higher than average in the State. It is, however, surprising to find in the U. S. Census of Agriculture that between 1959 and 1964 the actual dollar value of receipts dropped $175,000 while increases were reported in most other farming specialities. Undoubtedly, drought conditions contributed to this decline, but field crops and livestock receipts showed increases over this period.

Nevertheless, District officials conclude that truck farming will increase in importance as urbanization continues and the population increases expected from other economic stimulation are realized.

The District's number of farms has been declining sharply as has been true in most areas of Appalachia and the Nation. As of January, 1967, the Pennsylvania Department of Agriculture estimated that there were 4,600 farms in the Northeast District - 1,220 in Wayne and 1,160 in Schuylkill, the two leading counties. This was but 5.8 percent of the State's farms at that time. Perhaps more revealing is that the U. S. Census of Agriculture reported a drop of 36 percent in the number of farms between 1959 and 1964.

Much of this decline in the number of individual farms is explained by consolidation since during this same period the average farm size rose from 121.2 acres to 132.7 acres. However, this is not all of the explanation. Land area in farms fell from 26.7 percent of the District to 22.4 percent as total acreage in farms dropped 17 percent. Cropland declined 14 percent, and pasture 12 percent. Woodland on farms showed the largest decrease of all agricultural land uses - 33 percent.

The District's role in the State's timber industry is no more impressive than its position in agriculture. With nearly a tenth of the land area, it supplied one twenty-fifth of the 1964 sawtimber production of Pennsylvania. Its proportion of poletimber production is even less impressive - 3.2 percent of the State's production.

Stocks in the District's forests, on the other hand, are abundant. It had 8.4 percent of the State's sawtimber in 1964 and 14.8 percent of the poletimber, and the balances between the annual allowable cut and annual growth were showing sizable increases. As of 1954, there had been over-cutting in Lackawanna and Luzerne Counties, giving the District's sawtimber stock a deficit of 1.9 million board feet. By 1964, this deficit had been overcome and a surplus of 41 million board feet was reported. A smaller, though still impressive, increase in the poletimber balance was registered over the same period.

In terms of economic activity, forest products are of modest significance in the District. About 158 sawmills are scattered throughout the seven counties. Furniture, paper, and other wood products manufacturers employ 3.7 percent of all manufacturing employees. Few new jobs in wood using industries have resulted from the industrial development campaigns in the District.

DISTRICT PROBLEMS AND DEFICIENCIES

Through examination of the economic activity areas, population and employment trends, retraining needs for workers, and the role of natural resources, many needs of the District have come into view. District leaders have classified them as economic, social, and environmental problems. They have selected the problems that best can be solved through multiple-county efforts as the ones that the Economic Development Council of Northeastern Pennsylvania and other organizations should concentrate their resources on. Among them are the following:

Economic Problems -

1. Low levels of per capita income;
2. Low levels of output in manufacturing industries;
3. Levels of capital investment per employee in manufacturing industries below State and national averages;
4. Adverse industrial mix of manufacturing industries in which new high wage and rapid growth industries are needed to improve economic balance;
5. Shortage of entrepreneurial "risk" capital for new business ventures;
6. Apparent underemployment of manpower;
7. Shortage of skilled managers for new and existing businesses;
8. Unbalanced economic growth in which non-manufacturing employment has failed to keep pace with growth in manufacturing.

Social Problems -

1. Average educational attainment below State norms;
2. Occupational groups heavily weighted with operatives and unskilled workers and deficient in professional, technical, managers, and clerical skills;
3. Demographic profile at variance with State norms; higher proportion of people over 65 and lower proportion of those 25-44 years of age;
4. Unusually large proportion of men aged 17 to 65 outside the labor force;
5. Large number of small, uncoordinated governmental units often unable to provide a high standard of public services.

Environmental Problems -

1. Unsightly appearance of mining refuse, dilapidated housing, old industrial areas, and rundown commercial districts;
2. Air pollution caused by mine fires, burning culm banks, industrial processes, and motor vehicles;
3. Water pollution caused by acid drainage from mines, and industrial and municipal wastes;
4. Land subsidence damage to buildings, utilities, and roadways;
5. Water supply problems including the need of distribution systems, provision of necessary reserves in developing areas, and allocation of supplies to rapidly growing sections of Megalopolis;
6. Improvement of public facilities as suggested below.

Within individual counties, of course, the degree of severity of these problems varies. Accordingly, Northeast District officials have developed priorities of needed action for each county so that the most crucial local problems can receive earliest attention. For the entire District, these local officials developed a scheme of priorities based on the many different recommendations they received from the counties. These priorities are:

Northeast District Program Priorities

1. Sewage and Water Systems
2. Highway Construction
3. Housing Improvement
4. Industrial Development
5. Mine Land Reclamation
6. Vocational-Technical School Facilities

7. Medical Facilities
8. Manpower Training
9. Public Recreation Facilities
10. Urban Renewal
11. Higher Education Facilities
12. Elementary and Secondary Education Facilities
13. Air and Water Pollution Abatement
14. Airport Development
15. Tourism Development and Financing
16. Flood Protection
17. Libraries
18. Health/Welfare and OEO Programs
19. Model Cities
20. Public Buildings
21. Zoning and Planning
22. Highway Beautification
23. Law Enforcement

SEWAGE AND WATER SYSTEMS

The need for the Northeast District's highest priority program is most keenly felt in the largest communities where the industrial, municipal, and mining wastes have created the most serious conditions. Mine acid pouring into the Lackawanna and Susquehanna Rivers has obscured the problem by neutralizing the bio-degradable wastes from municipalities and industries discharging directly into these major streams. Tighter regulations by the Pennsylvania Sanitary Water Board and heightened community concern for improvement of local water resources have prompted expansion and new construction of sewage collection and treatment systems. Seventeen new systems to serve 36 communities and parts of many more will cost at least an estimated $100 million. A breakdown of these proposals by county shows that most of them are found in Lackawanna, Luzerne and Schuylkill Counties, where most of the people live.

TABLE 49

EXISTING AND PROPOSED SEWAGE SYSTEMS IN THE NORTHEAST DISTRICT

County	Number of Existing Systems	Number of Proposed Systems	Estimated Cost
Carbon	5	0	$ -
Lackawanna	5	7	63.1
Luzerne	7	4	27.3
Monroe	2	1	N.A.
Pike	0	1(Study)	N.A.
Schuylkill	7	4	10.3
Wayne	1	0	-
	27	17	$100.7

Source: Economic Development Council of Northeastern Pennsylvania.

Water systems tend to be a less serious matter since there are large ground water reserves throughout much of the District and municipal systems are extended more cheaply than is true of sewer lines. Some 64 existing systems are scattered through the urban areas of all of the District's counties except Pike. Only three new systems are currently proposed - two in Luzerne to serve new industrial parks and one in Monroe to serve Stroud Township. No cost estimates for them are available.

HIGHWAY CONSTRUCTION

Out of several score proposals and recommendations for highway improvements in the cities, towns, and rural sections of the District, five major needs have been isolated and given the highest priorities. In order of importance they are:

*reconstruction of U. S. 209 from Matamoras to I-81 in Schuylkill County, making it a limited-access four-lane route;

*reconstruction of Pa. 115 from Wilkes-Barre to the intersection with U. S. 209, providing six lanes of limited access road between Wilkes-Barre and I-80, and four lanes southeast to the Northampton County line;

*construction of an Inter-City Expressway on the west side of the Lackawanna and Susquehanna Rivers from Forest City to Nanticoke to connect the continuous urban area of this economic activity center;

*widen Pa. 390 to four lanes from Canadensis in Monroe County north to Lake Wallenpaupack in Pike County; and

*establish U. S. 6 as a "scenic highway" keeping the existing alignment but adding passing lanes to eliminate hazardous driving conditions.

The construction of these proposed projects would fill the gaps in the improving highway network that has been built over the past fifteen or so years. Beginning with the Northeast Extension of the Pennsylvania Turnpike and followed by construction of links of Interstate highways, the District's obsolete road system has become one of the most convenient in the Commonwealth. I-80 is already completed across the District; I-81 is completed from Binghamton, New York, to Hazleton. Sections in various stages of planning and construction are I-81 from Hazleton to Harrisburg; I-81E from Scranton to Pocono Manor in Monroe County, and I-84 from Matamoras to Scranton.

An improved U. S. 209 will link Schuylkill and Carbon Counties with the Delaware Water Gap National Recreation Area being constructed around the proposed Tocks Island Dam and Reservoir. Pa. 115 will improve connections from Wilkes-Barre to the recreation areas of the Poconos and to the east coast cities of Megalopolis as well. The Inter-City Expressway will give to the communities on the west side of the rivers speedy circulation comparable to that afforded the east side communities by I-81. Improvement of Pa. 390 is proposed to distribute tourists coming to the Poconos from the east by I-84, and establishing U. S. 6 as a scenic highway is another effort to make tourist travel more pleasant.

Many more highway improvements have been proposed by local and District officials. In Luzerne County, 15 highway projects of considerable local significance were proposed: five in Lackawanna; four in Monroe; three in Carbon; one in Schuylkill.

Access roads also were recommended by District officials. Many of these roads are related to site development needs for industrial parks and tourist development facilities. For example, access roads and/or site development are needed for industrial parks in Hazleton, Mahanoy City, Wilkes-Barre, Scranton, Pottsville, Tamaqua, Jim Thorpe, Nesquehoning, and Stroudsburg. Other access road projects proposed would serve the Ashland coal mine museum, the Scranton campus of the Pennsylvania State University, and the "Molly Maguires" film site at Eckley.

HOUSING IMPROVEMENT

The heavy out-migration of the fifties and early sixties is blamed for lagging home construction in the Northeast District, but the high levels of unemployment that occurred during this same period did not result in lower standards of housing maintenance. By 1960, the District compared favorably with both the State and the Nation in several key indicators recorded by the U. S. Bureau of the Census.

*84 percent of the District's housing units were reported to be in sound condition - the same proportion as for the State and slightly ahead of the Nation's 81 percent;

*46 percent were connected to public sewers compared with 30 percent in the State and 29 percent in the Nation;

*92 percent had hot and cold running water while 93 percent in the State and 87 percent in the Nation had these facilities; and

*65 percent were owner occupied while 68 percent of the units in the State and 56 percent in the Nation were.

These facts are perhaps the more significant in light of the greater relative age of housing units in the Northeast District. For example, four-fifths of all the housing units in the District in 1960 were built before 1930 while in the State the proportion was 64 percent. Apparently in the Northeast District older buildings have been well-maintained in contrast with many sections of the Nation where age and deterioration are often considered to be synonymous.

Thirteen housing projects have been proposed by District leaders - six in Lackawanna County, two in Luzerne, three in Monroe, and one each for Schuylkill and Carbon. Seven of them are proposals for housing construction or rehabilitation projects for low and moderate income families to be financed under Section 221 of the National Housing Act. The sponsors of these projects expect to take advantage of the new Appalachian Section 207 housing assistance program for planning and other preliminary expenses. Three of the District's economic activity centers - Scranton/Wilkes-Barre, Pottsville, and Stroudsburg -

have already been designated by the Appalachian Regional Commission as areas eligible to participate in this program.

Four of the District's housing proposals are for new public housing projects: two of these are in Lackawanna County, one in Luzerne, and one in Carbon.

The two remaining housing programs proposed by District leaders concern an effort to improve code enforcement in Lackawanna County and a desire to demolish or rehabilitate rural homes in Monroe County where dilapidated buildings are considered to be a liability to the tourist industry.

INDUSTRIAL DEVELOPMENT

For more than twenty years, industrial development has been the primary concern of leaders in every county of the Northeast District. The fact that now District officials find that it is fourth among concerns of local officials is itself significant. No longer is high unemployment the nagging problem that it was for two decades prior to 1965. Indeed, as mentioned earlier in this chapter, industrial development efforts in the Northeast District have become the model for many sections of the Nation since imitation is bred by success.

Now, instead of trying to attract industries that will employ large numbers of people, District leaders are determined to be more selective and thereby improve the industrial mix by broadening employment opportunities. Today, they seek industries paying high wages, industries utilizing modern technology, industries with high values of capital investment per worker, and industries in which employment is expected to grow rapidly. These are the employment goals which will help to raise per capita incomes in the District and thereby raise the standard of living.

Industrial parks are considered one of the inducements necessary to attract industries with the characteristics cited above. Already there are many industrial parks in the District, and ten more are proposed or in various stages of development.

Access roads, water and sewer lines, and related facilities are needed to serve the industrial parks. All told, eighteen separate project proposals have been developed to provide these facilities with the hope that grants from the Appalachian Regional Commission for access roads and other grants from the Pennsylvania Department of Commerce for water, sewer and other site improvements will bring them to early completion. Some of the access road projects have been listed in the highways section. Reclamation of strip mined land is proposed for industrial park areas in Lackawanna and Luzerne Counties, so that both conservation and economic development goals are to be achieved in one effort.

Along somewhat different lines, District officials have proposed that the lowbush blueberry industry be developed in Pike and Wayne Counties. As justification for this proposal, agricultural experts point to the favorable climatic and soil conditions of the area plus improved transportation provided by Interstate highways which will put the area within easy reach of east coast markets.

MINE LAND RECLAMATION

Restoration of land disrupted by mining - whether one means the removal of burning and non-burning culm piles resulting from deep mining, the filling of abandoned tunnels that are subsiding and damaging surface structures, the extinguishing or controlling of underground mine fires, or the restoring of strip mined areas to original contours - has great significance in the mining sections of Carbon, Lackawanna, Luzerne, and Schuylkill Counties.

The correction of these problems is considered necessary not only because they cause air and water pollution and often are hazardous, but because they appear ugly, and create a poor image of the area. Thus, local leaders and the Pennsylvania Department of Mines and Mineral Industries have been working for many years to mitigate these conditions. Since 1965, these efforts have been given substantial financial assistance by the Appalachian Regional Commission which has made grants total totaling $17.7 million for seven mine fire projects, seven mine subsidence projects,and one strip mine reclamation project in the District.

The job is far from completed. District leaders and the Pennsylvania Department of Mines and Mineral Industries have proposed many additional projects. Five of the proposed projects are to stop underground mine fires. Four of these are in Luzerne County in Wilkes-Barre, Hanover, Newport, and Plymouth Townships, and one is in Schuylkill County at Pottsville: Peach Mountain.

Five mine subsidence projects have been identified - three in the Scranton City Hill, Oxford, and Green Ridge sections, and two in Luzerne County at Ashley and Luzerne.

Strip mine reclamation projects have been proposed to eliminate mining scars and to restore land for uses such as industrial parks. In Luzerne County, projects have been recommended for areas in Wilkes-Barre City Parsons and Miners Mills sections, Wilkes-Barre Township, Hazleton, Larksville, and in Swoyersville at an industrial park site.

In Lackawanna County, a strip mine reclamation project has been proposed for a site in Dickson City to create an industrial park; another has been proposed for an area in Scranton. A project also has been recommended for a site in Pottsville, Schuylkill County.

A suggestion has been made to create a limited dividend corporation in the District to purchase culm piles and then secure public funds to eliminate them and make the land available for other uses. A similar approach could be used for strip mine reclamation projects.

VOCATIONAL-TECHNICAL SCHOOL FACILITIES

The District's two existing, three under construction, and four planned vocational-technical schools were described in the discussion of manpower training earlier in the chapter and do not require additional detail here. Other schools are now in the discussion stage.

MEDICAL FACILITIES

There are 28 general care hospitals with 4,800 beds serving the Northeast District. Of these, six State general hospitals and one Veterans Administration hospital account for a third of all the beds. Nineteen of the hospitals are found in Lackawanna and Luzerne Counties, and two thirds of the beds are in them. By contrast, Pike County has no hospitals, Wayne has one with 78 beds, Monroe has one with 192 beds, and Carbon has two small ones with a total of 119 beds.

There are three state mental hospitals with 3,700 beds and a variety of other organizations giving mental health care in the District. Some sixty nursing homes, thirty-seven of which are in Lackawanna and Luzerne Counties, provide extended care especially for the elderly infirm.

Sixteen new projects are now being advanced by District leaders. Seven of these are for improvements to general care hospitals, including construction of the first hospital in Pike County in the vicinity of Milford and Matamoras, and of improvements at the Carbondale General Hospital. Five of the proposals are to enlarge or provide convalescent facilities and homes for the elderly, one is a new medical center, another is a mental health center, and two are for rehabilitation of the handicapped.

These projects include facilities for the Institute of Physical Medicine and Rehabilitation in Scranton and St. Stanislaus Institute in Nanticoke.

Costs estimates have yet to be made for four of these projects, but five of the general care hospital projects will cost an estimated $10.3 million, three of the homes for the elderly will cost $8.5 million, the medical center $2.2 million, and the rehabilitation centers $1.6 million. Some smaller special proposals will cost about $350,000.

MANPOWER TRAINING

District officials have found it useful to distinguish between construction of facilities for occupational training and special programs for manpower training and utilization. Thus, they distinguish between vocational-technical schools and special manpower training programs sponsored under the Federal Manpower Development and Training Act.

As mentioned earlier, such special programs have offered training to over 2,200 individuals in the Northeast District since 1962. Six additional programs are now proposed by District leaders to achieve a variety of goals. In Carbon County, a $50,000 retraining program of adults has been proposed using the facilities of the County Vocational-Technical School at Jim Thorpe. A woodworking machine operator course to be conducted at the Johnson School of Technology in Scranton awaits Federal approval. Federal funds are also being sought to extend the Manpower Development and Training Act programs in progress at the West Side Vocational-Technical School in Luzerne County.

Another kind of training program proposed in Luzerne County is a computer seminar for business managers to suggest improved managerial techniques open to them. Still another approach in the same County is a proposed study of transportation of low-income families to determine ways by which broader employment opportunities can be opened to them. And a concentrated employment program coordinating public and private manpower programs is proposed to return dropout workers to the work force. This program will combine the resources of anti-poverty, social service, and employment agencies in getting employable people back into productive jobs. Its estimated cost for 15 months is one to two million dollars.

PUBLIC RECREATION FACILITIES

From State Parks to community tot lots, local officials recognize the importance of recreation facilities for both the well-being of its citizens and the attraction they provide the District's tourist industry. The Poconos have long been recognized as tourist country and that mountainous section has been developed by private resort owners around glacial lakes. The bulk of the District's State parks have been located here as well - six out of ten being in Monroe and Pike Counties.

A concerted effort is being made by the Economic Development Council to expand the tourist industry to other counties of the District as well. A big boost to this effort is coming from the expanding State Park system made possible in large part by PROJECT 70. Two new parks located in Schuylkill and Luzerne Counties were opened in 1968, and eight more are being planned, acquired, or developed - all of them in Schuylkill, Carbon, Luzerne, and Lackawanna Counties. They will add 13,428 acres of park land to the 43,000 existing today.

Local officials estimate that the tourist industry is the second most important to the economic base in the District. At the peak of the season, it employs more than 30,000 people and generates an estimated $100,000,000 in annual receipts. These new parks will contribute substantially to the expansion of this economic activity. Moreover, the creation of the 72,000 acre Delaware Water Gap National Recreation Area on the Delaware River will reinforce the attractiveness of the Poconos to the thirty million people who live within a hundred miles.

On a smaller scale, District officials propose construction of swimming pools, county parks, community parks, small fishing and boating lakes, and a municipal golf course as desirable public improvements in the near future. Five swimming pools in Lackawanna and one in Schuylkill, ten county parks - six in Luzerne and four in Lackawanna - and six small fishing lakes in Lackawanna, Luzerne, and Wayne Counties have been proposed.

URBAN RENEWAL

Since the passage of the State's Urban Redevelopment Law in 1945, the communities of the Northeast District have undertaken 57 renewal projects ranging from total clearance of areas to selective clearance and rehabilitation projects. Forty-five of these projects have been in Lackawanna and Luzerne Counties, ten in Schuylkill, and two in Monroe.

Once they are all completed, these communities, the State, and the Federal government will have invested an estimated $139 million in rebuilding commercial, industrial, and residential sections, and in providing new public parks and buildings.

Another eighteen projects, concentrated in Schuylkill, Luzerne, and Lackawanna Counties and expected to cost $86 million, are now in various stages of planning. Five in Wilkes-Barre will require $64 million of the total.

HIGHER EDUCATION FACILITIES

Eight private colleges with 11,400 students and six public colleges with 4,400 students provide higher education to residents of the Northeast District. Until recently, when the major universities of the State embarked upon programs of establishing 2-year branch centers in many of the larger cities of the Commonwealth, District students depended largely on private colleges or left the District to pursue their education. The only public facility was East Stroudsburg State College in Monroe County. Now the Pennsylvania State University has branch campuses in Scranton, Wilkes-Barre, Hazleton, and Pottsville. One community college has been established in Wilkes-Barre, another is proposed in Scranton, and a third is being promoted in Monroe County.

Both new and existing colleges, public and private, are proposing expansion programs that will cost an estimated $28 million. The largest proposal is a complete new campus for the Wilkes-Barre Community College costing $18 million. New buildings proposed for three private schools will cost $4.5 million, and an equal amount is needed for enlargement of two branch campuses of the Pennsylvania State University. Another proposal is to construct a science and engineering research center for all the colleges, universities, and industries in the Scranton/Wilkes-Barre-Hazleton-Pottsville area.

ELEMENTARY AND SECONDARY EDUCATION FACILITIES

In the Northeast District there are 424 elementary and secondary schools which had 191,000 students in the 1966-67 school year. As in other sections of the Nation, the local school districts of the Northeast District are constantly engaged in improving the buildings and facilities of their school systems to insure the best possible education for their children. Indeed, in Luzerne County the Director of the County Planning Commission mentioned that elementary and secondary school buildings needed replacement in most of that county's communities, an appraisal of conditions probably true of other areas as well.

Some of the more significant needs identified by local development officials are expansion of the inventory of Northeast Regional Instructional Materials Center, creation of a science program in the elementary schools in Wilkes-Barre, and development of a new science and mathematics program by Wilkes College for elementary and secondary students. Officials of Lackawanna County also pointed to their need of a high school, four elementary schools, and two vocational-technical schools, all of which are expected to cost about $10.7 million.

AIR AND WATER POLLUTION ABATEMENT

Several of the measures proposed for abatement of stream pollution were discussed in the section concerning sewage and water systems. In addition, District leaders are urging some water pollution studies, including funds for work to be done at Wilkes College and a Pike County study to maintain the existing high quality of ground water supplies as urbanization takes place.

A dredging project is proposed on Leggetts Creek in North Scranton to restore high quality to this stream that has been affected by acid impregnated by coal that has washed in it over the years.

The most important project to the District probably is the $68.2 million Lackawanna River and Susquehanna River Mine Drainage Abatement, Subsidence Prevention and Flood Protection emergency project advocated by State and local leaders alike and recommended in the Pennsylvania State Water Resources Supplement. The decline of deep mining in these river basins has resulted in the filling of these mines with water which has resulted in greater pollution and subsidence. A variety of measures will be taken when funds are provided. These include installation of pumps, boreholes, land reclamation and restoration, mine flushing, grouting, and treatment facilities.

Air pollution abatement, a concern in most urban areas today, is intensified in the anthracite mining sections of the District where underground mine fires and burning culm banks add considerably to the common pollutants emitted by automobiles, industries, and domestic heating systems. Many of the District's mine fires are being combated today using funds provided by the Appalachian Regional Commission and the Pennsylvania Department of Mines and Mineral Industries.

Taking a longer-range view of air pollution conditions, officials are supporting the proposal for an air pollution study by the Wilkes-College Institute for Regional Affairs.

In Monroe County, officials have proposed the establishment of a regional air pollution committee similar to the regional committees that have been established to deal with water pollution around the Tocks Island Reservoir and watershed.

AIRPORT DEVELOPMENT

Airports, like highways, are considered by development officials to be essential to their efforts to attract and service new business enterprises. Indeed, recent improvements at the Wilkes-Barre/Scranton Airport to accommodate jets of the three scheduled airlines are considered one of the District's important assets.

There are five other public airports in the District, only one of which - the Hazleton Municipal Airport - is served by regularly scheduled passenger service. All of these public airports have paved runways. In addition, there are thirty-three private airpstrips found throughout the District which have turf runways.

Six projected improvements have been suggested for the public airports, including increases in hanger space, creation of clear zones, installation of lights, and paving of runways. Only one of these proposals - the purchase of land and the extension of runways at the Mount Pocono Airport - has a specific cost estimate - $2,048,000. This project has been urged by local officials because it will serve both the tourist industry and a proposed industrial park in Monroe County.

TOURISM DEVELOPMENT AND FINANCING

The estimate of local officials that tourism is the Northeast District's second largest industry after manufacturing has been detailed in the Economic Development Council's study, Northeastern Pennsylvania - Playground of the Megalopolis. This study examined the amounts and kinds of investment that result in the most economic activity and found that, if anything, there was annual "under investment" in tourist facilities in the District.

Five courses of action have been proposed to assure the full development of this important industry - districtwide promotion, management seminars for tourist facility operators, expansion and improvement of public recreation facilities, more liberal lending terms to owners wishing to expand tourist facilities, and more alert regulation of objectionable developments and sources of pollution that destroy the District's attractiveness.

FLOOD PROTECTION

A survey of Pennsylvania by the U. S. Army Corps of Engineers revealed that nine communities of 2,500 or more in the Northeast District are subject to major floods. (A major flood was defined as one in which 40 percent of the community's buildings have been flooded in the past.) These communities are Carbondale, Blakely, Exeter, Forty Fort-Swoyersville, West Pittston, Wyoming-West Wyoming, Wilkes-Barre, Jim Thorpe, and Lehighton.

Already several flood control works have been constructed in the District by the Corps of Engineers and the Soil Conservation Service of the Department of Agriculture, and others have been proposed or are now under construction.

The Tocks Island Dam, better known for the benefits it is to provide for water supply and recreation, will also provide significant flood protection to communities on the lower Delaware River. Absence of control of the River's water in 1955 during Hurricane Diane cost downstream communities $100,000,000 in property damages.

The Pennsylvania Department of Forests and Waters has proposed channel improvements to Abrahams Creek in Wyoming and West Wyoming, Luzerne County, to overcome an unusual geologic condition in which once water breaks out of the channel, it flows away from the creek bed into homes and businesses. This project and a study of the proposed reservoir on Wapwallopen Creek in Luzerne County were recommended in the Pennsylvania State Water Resources Supplement.

LIBRARIES

In 1965, the District's twenty-eight libraries contained 728,000 volumes, employed 111 persons full-time, and had expenditures of $818,000. Lackawanna's six libraries have 219,000 volumes, followed by Luzerne's seven with 181,000, and Schuylkill's seven with 137,000. The Scranton Public Library is the tenth in the State in annual expenditures and Wilkes-Barre's is eleventh.

Overall, however, the District's library resources are found wanting in several respects. Existing facilities are in need of improvement - either repair or replacement - and expansion. The District lags behind the State and National averages in books per capita. Likewise it falls below State and National levels of per capita expenditures for libraries. The business and research sections of the libraries are considered small by Economic Development Council officials who recommend establishment of a committee to study library needs more thoroughly.

Already District officials have recommended some specific and general improvements, among them replacement of four branches of the Scranton Public Library and enlargement of another branch at a total cost of $1,700,000. In the Hoyt Library in Kingston, a project to increase the book inventory is proposed at a cost of $60,000.

The complete upgrading of the library system in Carbon County has been proposed. This would begin with the rehabilitation of the library system's main office at Jim Thorpe, but would extend to overhauling the system itself to give wider services to community programs - especially job training.

HEALTH/WELFARE AND OEO PROGRAMS

Health, welfare, and anti-poverty programs often are excluded from consideration by economic development groups, but in the Northeast District, officials find that these programs provide important underpinning to the general economy. The programs funded by the Office of Economic Opportunity, in particular, suggest direct aid in solving some manpower problems that officials have found perplexing. They found a higher than average proportion of adult men out of the labor market - apparent dropouts after the years of frustration when unemployment rates were very high - and designed a comprehensive training, placement, and social services effort to attack the problem. This program is to be conducted on an experimental basis in Wilkes-Barre at a cost of one to two million dollars, using community workers to locate the "dropouts" and to determine the cause of their apparent resignation. Then through combined efforts of social service agencies, the individual's handicap will be corrected so that the placement service of the Bureau of Employment Security can help the person get a suitable job.

Community action programs exist in many of the District's communities as do Head Start and Upward Bound programs which are intended to stimulate educational achievement. These programs are both beneficial to the individuals involved and to the community generally since they help individuals become productive citizens.

MODEL CITIES

Interest in the Model Cities program in the District may be likened to interest in the anti-poverty programs of the Office of Economic Opportunity since Model Cities also is a special Federal program. Like OEO programs, too, it is aimed at social problems and human services needs as well as the more traditional physical problems of neighborhoods which have been the concern of Federal housing officials.

Model Cities has been considered most important for fairly large cities, and to date, only Wilkes-Barre, among the District's communities, has been selected by the Department of Housing and Urban Development for Model Cities planning funds. Scranton officials have submitted an application in hopes of being selected during the second round of consideration.

The program is given high priority by these cities because it offers the opportunity of attacking social, economic, and physical problems of a whole neighborhood at once in a coordinated effort and promises not just the physical renewal of buildings, but also improvement in the lives of residents of the area.

PUBLIC BUILDINGS

When District officials were surveying needs of local areas, a number of public building projects were brought to their attention. In Lackawanna County, three new fire houses (estimated to cost $200,000), a new prison ($1.5 million), an addition to the court house ($2.15 million), and a community center at Clark's Summit were listed. In Luzerne, a new prison, a county administration building, and an addition to the county homes were specified. And in Monroe County, a new complex of county buildings including court house, jail, and library is being contemplated.

ZONING AND PLANNING

This District program item aptly illustrates local awareness that all efforts are not dependent on money and construction, but that orderly development often depends on patience and thoughtful attention to the future. Thus, planning, which is being conducted in most of the District's counties and all of its larger communities, is the local means of charting the directions communities should move for the greatest benefit. Through zoning, they can prevent incompatible development from occurring and thus save the expense of costly corrections in the future. Development officials know the importance that both planning and zoning have for national manufacturers who consider locating in the District, and therefore strive to have areas set aside for industrial use where there is no danger of future encroachment.

HIGHWAY BEAUTIFICATION

A related concern is roadside appearance, since the District's roads bring the tourists it wishes to attract. In Monroe and Pike Counties, general efforts to control junk yards and to limit billboards have been proposed. A related proposal in Pike County is the establishment of U. S. 6 as a scenic highway.

LAW ENFORCEMENT

While the District's cities boast low crime rates and the rural sections can cite even lower ones, there is some concern about giving law enforcement officials more efficient means of performing their duty. In Pike County, for example, it has been proposed that a law enforcement program be instituted for the County that can serve efficiently the scattered resorts and small communities. District officials also propose a study to investigate the possibility of forming county police and law enforcement departments as a means of increasing efficiency.

SPECIAL PROJECTS

Several individual projects have been urged by District officials but were excluded from the priority listing. The exclusion derives from the fact that they are unique to one section or one interest and not from any lack of importance. For example, improved educational television reception for Wayne County ($10,000 for engineering is needed) is the top priority in that County but has no significance to the remainder of the District. Thus, it has the highest county priority and no District priority. This project would involve the construction of an educational television "booster" system to extend reception to areas not now served and to become a part of the proposed Statewide educational television network.

Other special projects include a proposal to revive the District's railroads and to put abandoned rights-of-way to use for scenic parkways or for water and sewer trunk lines. A consolidation study for municipalities in the area of Stroudsburg is another special project proposed to District officials. A final special project of concern to District officials is improvement of their resources for publishing and distributing their own publications.

NORTHEAST DISTRICT DEVELOPMENT STRATEGY

Both the complexity of the District and the swift changes which have typified it for the past five years have impressed these officials that a strategy for development is needed, but that it cannot be static.

District leaders have evolved a development strategy with four important objectives:

*raise per capita incomes,

*improve the physical environment,

*create, nurture, and promote a new "image" for the District, and

*create a better institutional environment.

To raise per capita incomes, District officials propose to expand the scope of management consulting services to local businesses and industries to help them improve their efficiency and thus raise wages. Another recommendation to this end is that industrial development efforts be aimed at changing the industrial mix of the area by attracting fast growth, high wage paying industries.

Another means of raising per capita incomes is to raise the proportion of workers classified as managers, professional, and technical workers. The District today has a disproportionately large number of laborers and operatives who are qualified only for low wage paying jobs. Through education, some of them can be trained for higher wage occupations. Also the occupational structure can be changed by attracting skilled people from outside the District.

District leaders have determined that six groups have important roles in raising per capita income. The communications media have an educational function both in relating economic matters to residents and in creating a new image for outsiders. Educational institutions are charged with the responsibility of adjusting their curricula to changing needs of tomorrow's manpower requirements. Business managers are called upon to provide more on-the-job training and adopt new managerial techniques. Industrial developers are asked to be selective in the kinds of industries they attract to the District so that workers will have high wages. Job placement people are asked to work to get the adult males who have dropped out of the labor force back into productive work again. And governmental institutions are called upon to improve public services.

Secondly, improvement of the physical environment is to be achieved in the following sequence:

a) A program aimed at improving the tourists' initial impressions of the District is to be established;

b) Better utilization of private and public lands for recreational purposes should be encouraged;

c) New water resources are to be developed and existing sources and facilities are to be used more intensively;

d) The District's lakes, streams, and rivers should be cleaned up and public regulation should be fostered to prevent further pollution of surface and underground water supplies;

e) Better utilization of forest and agricultural resources should be encouraged;

f) Positive steps to alleviate air pollution should be tried; and

g) Land subsidence problems should be corrected.

Thirdly, creation of a new "image" for the District should be done by a public relations firm with careful coordination to economic and statistical research, community development programs, and the District's overall economic strategy. The new image desired is one of a tourist/recreation area.

Fourthly, creating a better institutional environment is to be achieved by making local government more efficient. Thus, non-partisan studies can be instituted to solve special problems relating to services so that more economic use of tax monies is achieved.

In an area as large and complex as the Northeast District, officials continue to weigh proposals for action, investigate promising economic development ideas, and study the rapidly changing quality of the economic, social, and physical environment.

SOUTHWEST LOCAL DEVELOPMENT DISTRICT

Nine counties in southwestern Pennsylvania - Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Washington, and Westmoreland - have formed the Southwestern Pennsylvania Economic Development District. This Southwest Local Development District region centered on Pittsburgh - the largest city in Appalachia - plays a dominant role in both Appalachia Pennsylvania and the entire 13-state Appalachian Region. It is not only the largest local development district in area among the seven districts in Pennsylvania, but it contains almost as many people as the other six combined - 47.5 percent of the estimated total population of Appalachia Pennsylvania in 1965. The Southwest District is easily the Region's single most important economic area. Indeed, its 2.8 million people are a sixth of the Appalachian Region's population although its land area is only a twenty-fifth of the Region's total.

The Southwest District's economic tradition of steel mills and coal mines is etched deeply in the American consciousness. This image of an industrial giant is richly deserved though altered considerably over the past two decades. But it derives from the District's earliest origins, from the iron furnaces in Pittsburgh that later became steel mills, from the barge and riverboat traffic that later gave way to the nineteen railroads converging on the City, and from the presence of the right raw materials at the right time.

Connellsville coal, an excellent metallurgical coking coal, gave the District a needed boost in the early days of the steel industry when 60 percent of the cost of steel from blast furnaces came from coke. Natural gas provided the early basis for the District's glass industry. Brine deposits gave rise to the early chemical industry while by-products of coal were the primary ingredient for the organic chemical industry.

The District's physical configuration has also played an important role in its development. In the period preceding 1840, when waterborne traffic dictated settlement patterns, Pittsburgh was a natural trading center and gateway to the West down the Ohio River. Through construction of the Main Line of the State Works it was connected by canal and railroad with Philadelphia. Other canals extended up the Monongahela and Allegheny Rivers and their tributaries. Thus, the District's rivers clearly dictated the location of Pittsburgh and other communities found up and down the river valleys today.

This early settlement during the era of water transportation was also influenced by the deeply eroded terrain typical of the Allegheny Highlands. Most of the scarce flatland was found in the flood plains adjacent to the rivers and since this was the most desirable land for building, community building began there. As a result, many small river towns developed separated by a ridge or hill, and despite the fact that today many of those ridges are also covered by buildings, the communities maintain their separate identities.

From early in the District's history it became apparent that agriculture would not be as rewarding as in central and eastern sections of the State. The forest floor gave the illusion of fertility with a nitrogen rich layer of leaf mold over decomposed layers of shale, limestones, and sandstones, but once the trees were cleared and the land lost its annual restorative of leaf mulch, it lost much of its fertility as well.

Instead, the Southwest District evolved from its early role as a trading center into the role of an industrial giant during the turbulence of the latter half of the 19th Century's industrial revolution. The era of railroads which threatened Pittsburgh's importance as a trading center actually brought it a new role - one in which coal mines furnished fuel for locomotives and steel mills produced rails for tracks criss-crossing the Nation. Now that era has largely passed and the Region, like others in Appalachia with specialities no longer in great demand, is again changing its economy. Its manufacturers of durable goods are still the backbone of the economy, but there is a clearly discernible change in emphasis from machine to brains shown in recently increased expenditures for education. The District, following the lead of Pittsburgh, is intent upon assuming the new metropolitan image of American cities in which highly educated people man the offices and research laboratories, the hospitals and universities, and similar service institutions that are growing rapidly today.

The District's economic dominance of Appalachia Pennsylvania is revealed in a number of ways. In several key industries, it has well over half of the jobs in Appalachia Pennsylvania - in contract construction it has 58 percent; in finance, insurance, and real estate 62 percent; in services and in trade 55 percent; in stone, clay, and glass 62 percent; in primary metals 72 percent; and in transportation, communications, and public utilities 50 percent.

If a District's fair share of jobs is equal to its share of total population, there are many industries in which it falls short of its 47.5 percent share. Leather, apparel, and textiles, all with less than ten percent of Appalachia Pennsylvania's employment, register the lowest proportions in the Southwest District. Agriculture, paper, and lumber have about half the proportion of jobs that might be expected from the District's share of Appalachia Pennsylvania's population. Others like mining, civilian government, food products, transportation equipment, chemicals, publishing, and machinery manufacture fall just below the District's population proportion.

Even so, the Southwest District's share of jobs is one percent more than its share of population; this one percent amounts to 18,500 jobs. The District has its full share of retail establishments which in 1963 accounted for 51 percent of sales in Appalachia Pennsylvania. The District's wholesaling function is much more impressive in that it contains 52 percent of the wholesaling establishments which did 70 percent of Appalachia Pennsylvania's wholesaling business in 1963.

With Pittsburgh at its center, the District has attracted more than its share of Appalachia Pennsylvania's talented workers. Pittsburgh is third among all of the Nation's cities in the number of home offices of giant corporations located in it, and these corporations have developed and held a highly skilled labor force. In 1960, the District contained 54 percent of the professional, technical, and kindred workers, and 50 percent of the service workers and the managers, officials, and proprietors of Appalachia Pennsylvania.

As might be expected, this higher proportion of professional and skilled workers causes the District's workers to earn more than its proportinal share of the $1.8 billion in wages and salaries paid to workers in Appalachia Pennsylvania in 1965. In that year, 54 percent - slightly over a billion dollars - went to the Southwest District.

Still another indication of the District's economic vigor is represented in the holdings of the Southwest District's financial institutions. They had 62 percent of the $13.7 billion of deposits and assets held by banks and savings and loan institutions in Appalachia Pennsylvania in 1967.

These indicators of economic strength describe the most compelling fact about the Southwest District - it is not a withering giant or a shadow of its former self. It remains the foremost economic center in Appalachia and in Pennsylvania second only to the southeastern area around Philadelphia. But mighty as the District is, it presents a paradox that reveals itself repeatedly throughout this chapter, the paradox of great social, intellectual, and economic energy yet a limited ability to grow.

There is no doubt that Pittsburgh will be the center of a major metropolitan area in the future as today, but at the same time the Southwest District will, if past trends continue, probably grow slowly and experience a substantial out-migration of residents. That is the paradox: a strong, resilient economy but one where new job opportunities grow slowly.

The District's population was 73 percent urban in 1960, and this statistical fact comes closest to describing Beaver County where 71 percent of the population was urban. Allegheny County, with 1.5 million of the District's people, was 93 percent urban, while smaller, outlying counties were quite the opposite. Greene with 13 percent, Armstrong and Indiana with 23 percent, Butler with 29 percent, and Fayette with 30 percent fall at the other extreme.

Thus, the District has a high proportion of people living in urban places, but much of the area is not urban at all. The rural sections tend to lose significance when the District is aggregated. As an illustration, the proportion of rural-farm population for the District was but 1.6 percent in 1960. In Greene County, which leads the State in sheep raising, a seventh of the population was made up of farming families. In Indiana County farming families were an eighth of the total and in Armstrong and Butler Counties about a twelfth.

From this statistical viewpoint, one might conclude that the Southwest District is a region of contrasts, where a statistical fact is most often an average between Allegheny County at one extreme and the surrounding ring of counties at the other. Since averages do offset important differences, particularly economic differences, a close view of each economic activity area can lead to a better understanding of this complex District.

ECONOMIC ACTIVITY AREAS

The largest and foremost of the economic activity areas is, of course, Pittsburgh.

PITTSBURGH is an economic activity area that covers about three quarters of Allegheny County and extends into surrounding counties along the rivers and highways that connect urban areas. Giant arms of urbanization extend down the Ohio River from Pittsburgh and up the Monongahela, Youghiogheny, and Allegheny Rivers, reflecting the age-old ties of Pittsburgh and its neighbors. Similar, though smaller urban strips stretch out along the principal highways - U. S. 30 east into Westmoreland County, Pa. 8 and U. S. 19 north toward Butler County, I-79 and U. S. 19 south into Washington County.

Pittsburgh at its center had 604,000 people in 1960 while an estimated 1,087,000 people lived in the urban areas surrounding it. The hinterland of small rural communities which depend on the business, social, medical, and related services of this urban complex contained an estimated 187,000 people.

In all, the Pittsburgh economic activity area has a population estimated at 1,878,000. This is 65 percent of the Southwest District's entire population - a much larger proportion than is the case in Pennsylvania's other local development districts. (Scranton/Wilkes-Barre with 50 percent of the Northeast District's population has the second largest proportion.)

The Pittsburgh economic activity area's population not only dwarfs the other activity areas in the Southwest District, but also dwarfs the populations of other local development districts as well. It has twice as many people as the entire Northeast Local Development District and has 700,000 more people than the 13 county district centered on Birmingham, Alabama - the second largest in all Appalachia.

The size of its population puts Pittsburgh in a class alone and beyond comparison with other cities in Appalachia, but more importantly, this size results in a different quality of economic activity in several respects. To be sure, there is still considerable employment in steel mills and related factories which have been a key element in the District's heritage for a century, but since the end of World War II, Pittsburgh's leaders have changed both the face of their city and much of its economic basis. For instance, in the past twenty years the transformation of downtown Pittsburgh, often called the Golden Triangle, has included construction of 28 new office buildings into which a new industry of office workers has moved.

Some trends may show the transformation that has occurred. Six office buildings, a hotel, an apartment house, and a State Park have been developed at the Point in downtown Pittsburgh, and other buildings have been constructed elsewhere in the Golden Triangle. In 1949, there was 36.7 million square feet of building space in downtown Pittsburgh, of which 32 percent was in offices. By 1960, building space had been increased to 41.5 million square feet and the proportion that was in offices had increased to almost 39 percent. The building boom has continued during the sixties. In 1968, the City Planning Commission reported that new construction will bring the 1970 total to at least 45.5 million square feet and that the proportion in offices will be about 46 percent.

New office buildings constructed in downtown Pittsburgh during the past twenty years have cost an estimated $322 million and other new buildings have cost an additional $132 million. This massive city rebuilding has obviously paid off the City handsomely through new tax revenues. Perhaps more important, however, is the change in industrial structure that has resulted.

A new industry - although it has yet to be dignified in official governmental reports - has clearly emerged in downtown Pittsburgh. It is office work. The number of office workers is often obscured because in employment statistics they are reported along with factory workers in a particular industry. But there is at least one characteristic of office workers that distinguishes them from factory employees - they work in regular salaried positions.

Office work has become one of the hallmarks of every metropolitan area of the Nation and has become itself a growth industry. In Pittsburgh, the growth has been keeping pace with new office construction. In 1960, there was an office force of 65,700 in the Golden Triangle, and by 1968 this work force had increased to an estimated 84,900 (of which 73,000 were non-governmental employees).

Office work is the clearest example of the changing character of metropolitan employment because it occurs in spectacularly large buildings, but Pittsburgh's character is revealed in at least three other respects - health, education, and research and development. Each of these fields, like office work, has become a distinctive industry in the life of metropolitan Pittsburgh.

The forty-two hospitals of Pittsburgh and Allegheny County provide medical care for patients from the nine-county Southwest District and beyond. They represent $350 million of facilities, are regional as well as metropolitan in character and influence, and provide special equipment, services, and personnel unavailable in outlying areas. They are important not only from the standpoint of their basic humanitarian reason for being, but also for their roles in medical education and research. Ten hospitals have active nurses' training programs. In the Oakland section of Pittsburgh, the major reorganization of four hospitals has heightened specialization and improved medical education for the students in the University of Pittsburgh's Schools of Medicine and Dentistry. The University has invested over $60 million in this new health center.

Medical service is, in addition, an important and growing industry in the Pittsburgh economy. In 1967, there were 275,000 patients admitted to the forty-two medical hospitals. About 26,500 persons were employed by the hospitals to care for these patients. Their payroll came to $123 million and total hospital expenses were $195 million.

The activity of hospitals represents merely part of the medicine economy. There are numerous private clinics and doctors' offices in which Allegheny County's 2,900 doctors practice. The doctors, in turn, hire uncounted supporting technicians and purchase services from private laboratories. Thus, by any estimate the medicine economy of Allegheny County probably generates thirty-five to forty thousand jobs.

Higher education is another field which has become an important economic factor in the life of metropolitan Pittsburgh. The City has long been the home of such leading schools as the University of Pittsburgh, Carnegie-Mellon University, and Duquesne University, but only recently has education begun a spectacular growth. Enrollments have grown about 18,000 in the 1963-67 period, and this 54 percent rise has been accompanied by a $66 million rise in the value of higher education facilities.

Colleges are not yet as large an economic factor in the metropolitan life as hospitals, but they are expanding more rapidly. By 1967, there were 11,800 employees in ten of Allegheny County's institutions of higher learning; 6,400 were faculty members. These ten schools reported $121 million in operating expenses of which $62 million was for wages and salaries of employees.

Almost as important as expenditures by the schools themselves is the money students bring to the economy through room, board, and incidental expenditures. At an average of $1,200 per student annually, they would bring about $62 million into the economy. Another important economic effect of students is that they present a large resourceful, low-wage labor force.

Of the many businesses that seek both students and graduates, none is more dependent on the County's schools than the research and development industry. It has become axiomatic that research and development firms establish themselves as satellites to major universities since experts move back and forth between the research lab and the classroom. Students, especially those seeking advanced degrees, do so also.

Around Pittsburgh, this industry has mushroomed in the sixties as rapidly as have office buildings downtown. Of the Nation's scientists, engineers, and technicians, one in fifty works around Pittsburgh. By 1968, the Regional Industrial Development Corporation had identified 170 research laboratories in the nine counties around Pittsburgh - most of them in the Pittsburgh economic activity area. These laboratories have about 20,000 employees of whom slightly over half are professional scientists and engineers and the remainder are research assistants and technicians. The facilities housing these research activities exceed $400 million in value, according to Regional Industrial Development Corporation estimates, and annual budgets are estimated to reach half a billion dollars. The fruits of this investment can be glimpsed from the Pittsburgh area's high output of new products. Each year Industrial Research sponsors a panel of experts who identify the 100 most significant new technical products; for the 1963-67 period, Pittsburgh's research and development laboratories have produced a tenth of the total.

Like the office industry in downtown Pittsburgh, research and development is not discrete. Instead it overlaps traditional categories of employment such as primary metals, electrical machinery, chemicals, and petroleum. Nevertheless, there are large research and development components within the Distict's largest industries - United States Steel, one of the area's major employers, has large research laboratories for metals and alloys and has in recent years embarked upon extensive research in chemicals at its Clairton plant. Alcoa, with home offices in Pittsburgh, is rebuilding its New Kensington Plant and adding a $30 million technical center on a 2,300 acre site nearby where 1,000 scientists and technicians will be employed.

Because of the overlap of employment data and also because there is a scarcity of financial data, it is difficult to compare the economic impact of research and development with other industries. Yet the 20,000 research and development employees exceed all the manufacturing sectors in Allegheny County except primary metals which had 65,000 employees in 1966.

Another distinguishing feature of the Pittsburgh metropolitan character might be termed "culture" or "entertainment and recreation." Whatever term is appropriate, size again is probably the best explanation for the presence of a leading symphony orchestra, major league baseball and football teams, a professional hockey team, the Civic Light Opera, the Pittsburgh Opera Company, the American Wind Symphony, and many smaller musical groups. There are three legitimate community theatres and two commercial theatres plus four summer theatre groups. The Carnegie Library and its seventeen branches is the nucleus of the County's library system. An Aviary, Buhl Planetarium, Phipps Conservatory, Carnegie Museum and Art Gallery, two zoos (one for children), an arts and crafts center, and the Allegheny Observatory are among the attractions in the Pittsburgh economic activity area.

They represent the enrichment possible in a metropolitan area. And they clearly have regional importance to educators who use libraries and museums, to sports fans who follow their favorite teams, and to spectators who visit theatres, music halls, and other centers. To economists as well, they represent a source of economic vigor in the metropolitan economy, one that has unfortunately never been defined in monetary or employment terms. Even if operating budgets and payrolls could be determined, expenditures by visitors from outside the metropolitan area for food and lodging would have to be added to determine the total economic impact.

In a metropolitan center, culture and sports, research and development, universities, medical centers, and office buildings are not unusual. But elsewhere in Appalachia, even in Standard Metropolitan Statistical Areas, they do not exist in such profusion or achieve as much expertness and specialization as in the Pittsburgh area. The specialization here, however, is far from static. The downtown stores of the Golden Triangle, for example, have long dominated fashions and retailing throughout the Southwest District, but since 1948, retailing in downtown Pittsburgh has declined in sales volume as suburban shopping centers came into competition. The move of families to the suburbs during the 1947-68 period prompted the construction of 7.7 million square feet of shopping center retail space outside the Golden Triangle and created jobs for an estimated 14,000 workers.

Another shift occurred in hospital service. During the post World War II period, the regional significance of Allegheny County's hospital service has declined relative to community service. To be sure, hospitals themselves have grown (in contrast to retail shopping facilities in downtown Pittsburgh) but the number of patients coming from outside Allegheny County has not grown as fast as the number of local patients served.

This decline of regional hospital service reflects both improved hospital service in surrounding counties of the Southwest District and more concentrated attention within Allegheny County on providing community hospital service to patients not heretofore served.

Clearly these changes - suburbanization, shopping centers, and community hospitals - are typical of metropolitan areas during the fifties and sixties throughout the Nation. Some other changes have been less typical and have contributed to the paradoxical condition mentioned earlier - slow growth of a strong economy. Job losses hit industrial communities in the Pittsburgh economic activity area, costing Allegheny County 69,000 manufacturing jobs between 1951 and 1966. During the same period, 6,100 mining jobs disappeared.

The catalogue of reasons behind these job losses ranges from automation to zoning and includes obsolete equipment, changed demand, national recessions, labor-management disputes, low productivity, and similar matters. Replacement of these jobs through industrial development efforts was not easy because the steel industry has given the Southwest District a reputation for high wages; many industries brought to the State during the fifties and sixties have been in needle trades where wage rates are low. Such industries generally avoid high wage paying areas.

So during the same period that downtown Pittsburgh was being refashioned into an office center, many river valley towns were declining. Pittsburgh itself lost 72,000 people during the fifties and an estimated 49,000 between 1960 and 1965, while suburban areas have grown. Likewise many of the oldest communities in Allegheny County - McKeesport, Wilkinsburg, Clairton, Duquesne, Homestead, McKees Rocks, Braddock, North Braddock, Swissvale, Tarentum, Carnegie, Turtle Creek, and Wilmerding - showed losses.

In these communities, manufacture had been almost a way of life - rolling mills, fabricating plants, and machinery production. Of the 69,000 jobs lost in Allegheny County factories between 1951 and 1966, 40,000 were in primary and fabricated metals and in non-electrical machinery manufacture. Other industries that experienced substantial losses included electrical machinery (-9,700 jobs), transportation equipment (-10,400), and food processing (-5,700). As the factories in these river communities shut down, automated, or laid off workers, local economies suffered. Unemployment rates soared; some families moved.

From 1950 to 1960, the job losses registered by some of Allegheny County's oldest industrial communities were staggering. The U. S. Census showed that McKeesport lost 3,331 jobs in primary metals - 41 percent of its 1950 primary metals total; Braddock lost 37 percent of its 3,147 manufacturing employment, most from primary metals; Duquesne's 1,633 job loss in primary metals was slightly offset by increases in other sectors. In other places, the totals were smaller, but losses nevertheless were serious. Primary metals was the chief loser in Carnegie, Clairton, Homestead, North Braddock, and several smaller communities, and was joined by electrical machinery in Wilkinsburg, Turtle Creek, and Swissvale. Pittsburgh was having a similar experience as it lost 15,600 jobs during the same decade - 7,100 in primary metals, 1,000 in machinery, 1,300 in food, 800 in fabricated metals, and 750 in electrical machinery.

If this blue collar decline was causing economic stagnation in the river valley communities, the rise of white collar employment was having the opposite effect in the communities on the plateaus above. Monroeville nearly trebled its population while many other communities doubled theirs in the 1950-60 decade. Among the largest that doubled were Penn Hills Township, McCandless Township, Scott Township, Wilkins Township, and Whitehall Borough. In still other places the increases were substantial, as in Shaler Township (8,000), West Mifflin Borough (9,300), Ross Township (10,200), Elizabeth Township (4,200), Hampton Township (4,500), and North Versailles Township (3,700).

Nor were these effects confined to Allegheny County. The pattern was the same throughout the Pittsburgh economic activity area. Older industrial communities such as New Kensington, Vandergrift, Arnold, Apollo, and Leechburg in the Allegheny and Kiskiminetas River valleys suffered both population and manufacturing employment losses. The largest of the job losses occurred in New Kensington where manufacturing employment dropped from 4,500 to 3,200 in the 1950-60 decade. Of the 1,300 loss, 980 was in fabricated metals.

By contrast, North Huntingdon, Penn, and Allegheny Townships in Westmoreland County were registering gains as were communities in Butler, Washington, and Armstrong Counties that lie in the Pittsburgh economic activity area.

Recent population estimates suggest that the trends of the fifties accelerated in the early sixties. During the 1950-60 decade, population growth did not keep up with the natural increase (births in excess of deaths) so that there was an out-migration of 85,811. U. S. Census estimates suggest a continued migration between 1960 and 1965 amounting to 111,000. By 1965, the Allegheny County population had dropped from 1,628,000 to 1,590,000.

Pittsburgh's loss was even larger - 42,000 during the same five years. It can be assumed that the older communities have continued to lose population and that some newer communities have continued to grow, but that the suburban growth has been insufficient to offset out-migration.

The older communities have not accepted this decline in fortunes lightly. They remain - as Pittsburgh has amply demonstrated - the social, educational, economic, and transportation centers for surrounding populations. As their traditional sources of employment in old manufacturing industries shrank and downtown businesses suffered, governments were called on to help restore economic health. Industrial development programs were organized in communities throughout the three river valleys, but they had less initial success than was true in other local development districts. Perhaps more important in combating the ills of the Allegheny County industrial communities was the determination to rebuild large sections of them and obtain new highway connections.

Pittsburgh undertook seven urban renewal projects covering 837 acres that will cost over $300 million in public money before completion. Its first project - the one that inspired not only neighboring communities but cities throughout the Nation - was redevelopment of the Point in which no Federal funds were involved. Since 1949, when Federal matching funds became available, twenty-two other Allegheny County projects have been initiated in places including McKeesport, Carnegie, Duquesne, Turtle Creek, Wilkinsburg, Wilmerding, and

Braddock where changing economic circumstances dictated positive action by local government. The State also has provided financial assistance for urban renewal programs and other community improvement projects.

During the past twenty years, dramatic changes have occurred in the communities of Allegheny County. Job losses in steel mills and in fabrication, machinery, and electrical equipment plants; downtown business failures; the automobile revolution which clogged downtown areas with intolerable traffic; the growth of the suburbs - all occurring together brought the decline of many older communities.

A simultaneous revolution in agriculture brought farmers - many of them southern Negroes - to Pittsburgh and neighboring communities in search of the very factory jobs that were so rapidly declining. Previous migrations into the Pittsburgh economic activity area had been prompted by expanding job opportunities in steel mills and coal mines. Instead of being able to absorb this migration into its economic, social, and political life as in the past, Allegheny County's older communities found the newcomers a burden. Not only did they lack skills, but there were too few job openings in which they could learn them. And with jobs scarce, these people often were met with exclusionary hiring practices.

Hard times were apparent in much housing which had been neglected by owners. Rental housing was in the worst shape, and it was this in which newcomers often found themselves. Negroes became concentrated in Pittsburgh, Braddock, Clairton, and Duquesne. These communities and others, including Carnegie, McKeesport, McKees Rocks, New Kensington, and North Braddock, were reported in 1960 with as much as a quarter of their housing units deficient in plumbing or maintenance.

Suburban townships were having a more typical American experience.

Their housing units were newer and in better shape, and they had fewer unemployed residents. When in 1958 and again in 1961 the Pittsburgh Labor Market Area had almost 11 percent of the work force unemployed, the suburbs fared much better than the old industrial towns which had a disproportionately large share of job seekers.

Since then, unemployment rates have dropped steadily and have hovered from 1965 to 1968 at around 3 percent, with both suburb and industrial community experiencing a new prosperity. The steel industry has added workers and has been a major factor in the new economic vigor. It accounted for 9,500 of the 17,600 new manufacturing jobs that developed in Allegheny County between 1962 and 1966.

To a great extent, the new prosperity of the Pittsburgh economic activity area is permanent while some new jobs - like those in the steel mills - may be traceable to Vietnam conflict spending. Conditions like those of the early fifties in which many antiquated plants were waiting to be junked do not exist today, however. Modern basic oxygen steel furnaces have been installed by seven Pittsburgh area producers giving the District more of this modern capacity than any other steel making center. Coal mining has already been modernized and is slowly increasing employment. Many of the other factories in the area have also been modernized. Significantly, female manufacturing employment is a low 11 percent as it has been traditionally in the area.

More importantly, the metropolitan character of Pittsburgh's offices, colleges, hospitals, and research laboratories makes the area as contemporary as any other economic center in the Nation today.

The dominance of Pittsburgh is an accepted fact in the Southwest Local Development District. Other economic activity areas are clearly satellite and exist within the orbit of the Pittsburgh metropolitan economy. The larger city is expected to provide wholesale and distribution services, business, technical, medical, and educational services, and some jobs for residents of surrounding economic activity areas. Hence, the smaller places have more specialized and less well balanced economies than if they existed far beyond the shadow of their large metropolitan neighbor.

BEAVER VALLEY is an economic activity area which illustrates the point in that it contains 194,800 people - about the same population as in the Johnstown economic activity area - but no major central city in the area contains most of the people or the range of services expected in an area with that many people. Instead its highly urban population is scattered throughout such communities as Aliquippa (23,100), Beaver Falls (15,100), Ambridge (13,900), New Brighton (8,400), Monaca (8,400), Beaver (6,200), Baden (6,100), and Rochester (6,000). In all, an estimated 166,600 of the activity area's people live in these communities and their urban fringes while the remaining 15 percent of the population lives in the surrounding rural hinterland.

Like Johnstown, this economic activity area has developed with the steel industry (primary metals, fabricated metals, and non-electrical machinery) which provides 37,400 of the 45,500 manufacturing jobs, thus making the area dependent on the fortune of this industry. Unlike Johnstown, however, coal mining has not been an important source of employment nor a cause of unemployment and out-migration. Indeed, during the forties and fifties when many other sections of Appalachia Pennsylvania and several parts of the Southwest District were suffering heavy population losses, Beaver County, most of which is included in the Aliquippa-Beaver Falls-Ambridge economic activity area, grew at about twice the rate of Pennsylvania. About 50,000 people were added to the population during the 1940-60 period.

Since 1960, this growth has fallen off. The 206,000 county population of 1960 is estimated to have decreased to 195,000 by 1965.

Manufacturing employment has fluctuated in just about the opposite direction from population. From 1951 to 1956, Beaver County's manufacturing workers increased from 49,200 to 51,950 and then proceeded to drop 7,000 by 1960. During this decade when the County was losing 4,200 jobs (and the steel industry was losing 1,700) the population increased 18 percent. Between 1960 and 1966, much the opposite occurred. Manufacturing employment increased by 600 (and the steel industry gained 800 jobs) but population is estimated to have dropped 5 percent.

There is no simple explanation for the fact that population continued to increase in the fifties in the face of declining manufacturing employment while it has decreased in the sixties as the number of manufacturing jobs rose slightly. A possible explanation might be that during the fifties joblessness was thought to be a national phenomenon and consequently seeking employment elsewhere would be fruitless, while in the sixties joblessness came to be viewed as a local condition from which one could escape by moving out.

Whatever the explanation, this economic activity center is dependent on the steel industry for 70 percent of its manufacturing jobs and this industry is now deeply committed to new labor saving processes. New basic oxygen furnaces are being installed to produce in 50 minutes as much steel as open hearth furnaces can produce in eight hours. This capital investment in modernization keeps local plants competitive with other producers, but does not result in new employment opportunities.

Industrial development efforts have not been notably successful. In particular, there is a dearth of job opportunities for women in manufacturing. In 1966, they made up only 8 percent of Beaver County's factory workers.

The economic activity area's dependence on the prosperity of the Pittsburgh region is emphasized by local leaders who view highway projects such as the Beaver Valley Expressway and the Freedom Bypass as necessary for economic development. The activity area's present highway situation, ironically, affords a high-speed connection from the northern and least industrialized part of Beaver County via the Pennsylvania Turnpike to distant regions. The southerly and most heavily industrialized parts have an outmoded highway system that follows river valleys through large and small communities.

MONONGAHELA VALLEY is the third largest of the Southwest District's economic activity areas with a 1960 population of 178,000. Like the Aliquippa-Beaver Falls-Ambridge economic activity area, it includes a large population without having a dominant city.

The Monongahela Valley economic activity area has four principal activity centers. The largest contains approximately 82,000 people and includes Monessen (18,400 people), Donora (11,100), Monongahela (8,400), Charleroi (8,100), California (6,000), and surrounding urban fringe areas. The Brownsville economic activity center contains approximately 27,000 people. And farther south along the Monongahela River, Masontown (population 5,000) and Point Marion (2,000) are lesser centers. The urban fringe around these four centers is estimated to contain 47,000 people and the rural hinterland has approximately 52,000 people.

Information concerning this economic and geographic unit is difficult to obtain because the area includes part of four counties - Westmoreland, Washington, Fayette, and Greene.

U. S. Census data help give an indication of the changes that have occurred in the Valley's leading communities - Monessen, Donora, Monongahela, Charleroi, California, Brownsville, and Masontown. Total employment dropped 3,000 from 1950 to 1960 while population dropped only a thousand. Donora lost a thousand jobs in the steel industry and Monessen lost another 750. These two communities sustained an additional 1,500 loss in manufacturing employment, while the smaller centers tended to offset one another's gains and losses.

The story was similar for coal mining, an industry in which neither Monessen nor Donora has many workers but the smaller communities do. Generally, miners have lived in surrounding townships for which employment data are not available. However, characteristic of what has happened is the drop in miners in the seven communities named above. Between 1950 and 1960, they lost 1,127 miners from the 2,082 employed in 1950.

Steel and mining losses can be blamed, then, for most of the 3,000 job loss in the economic activity area. The problem of creating new jobs in the Monongahela Valley has been somewhat complicated by the natural reluctance of unemployed steel workers to accept lower wage jobs in other industries. Consequently, long-term unemployment was common among the jobless.

Today, local observers report, the situation is improved. Unemployment levels which often exceeded 10 percent during the fifties and sixties are now down to below 5 percent. There is not, however, much indication of new employment. Metals with 8,075 employees throughout the Valley in 1966 remained the leading source of manufacturing employment and was well ahead of stone, clay, and glass which had 1,867 job holders. Five apparel plants contain 564 workers, most of whom are female. These plants provide most of the Valley's female manufacturing jobs which constitute 17 percent of the total, a proportion twice that of the Beaver Valley communities discussed previously.

Since 1960, the activity area has suffered through changes in the steel industry. At Donora, where a few years ago the U. S. Steel works producing steel, wire, and zinc employed over 6,000 men, the plant has been dismantled leaving the community no economic base. Coal mining has continued to produce large tonnages with even fewer men - down to an estimated 2,500 by 1967.

MT. PLEASANT-UNIONTOWN is the economic activity area which is the fourth largest in the Southwest District with a 113,000 population in 1960. Like much of the remainder of the District, the population in this area is highly urban with four out of five people living in one of the four economic activity centers of the area. Uniontown is the largest of the economic activity centers with a 1960 population of 38,900. It is followed by Connellsville with 28,100, Mount Pleasant 15,400, and Scottdale 8,200.

This economic activity area covers much of Fayette County and extends into southern Westmoreland County in which Mount Pleasant and Scottdale both lie. The four centers are linked together by U. S. 119 as well as a shared history of bituminous coal mining. Here the famous Connellsville coal seam was found and exploited. This excellent metallurgical coking coal is given much credit for the success of Pittsburgh as a steel making center, and during the heyday of the Bessemer and open hearth furnaces the deep mines and beehive coke ovens of the area provided the economic base of the area. In the middle forties over 22,000 miners produced more than 20 million tons of coal annually. By 1950, there were only 9,600 miners in Fayette County and production was down to 10 million tons.

In 1950, mining was still the Uniontown-Connellsville labor market area's major source of jobs, accounting for one out of five. Manufacturing, by contrast, supplied one of seven. Between 1950 and 1966, 8,500 mining jobs were lost while only 1,400 new manufacturing jobs were created. All industry sectors suffered as the economic base of the area eroded and unemployment rolls soared. From 1958 to 1961, over one in five in the work force was jobless. Not until 1965 did the unemployment rate drop below ten percent. Even then the rate far exceeded the State average. By 1967, its 7 percent unemployment rate was more than double the 3.4 percent Pennsylvania rate.

This loss of jobs is blamed here as in other mining communities for the subsequent loss of population. Between 1950 and 1965, Uniontown lost an estimated one in seven of its population. Connellsville City lost 800. Fayette County's total loss during this period is estimated to be 50,400. The labor force in turn, declined by 10,900 during this decade and a half.

Mining today is the area's fallen giant. Production continues to fall so that by 1966 Fayette County produced only 1.5 million tons of coal. Only 1,100 mining jobs remain. Manufacturing has become the single most important employment sector providing 22 percent of all jobs, followed by retail and wholesale trade with 17 percent of the labor market area's jobs.

The industrial base of the Mt. Pleasant-Uniontown economic activity area is both larger and more diversified than in the past when mining employment was dominant. By 1966, metal fabrication with 2,700 jobs was the leader, followed closely by stone, clay, and glass with 2,200 employees. Four other industry groups - apparel (900 jobs), food (775), primary metals (760), and transportation equipment (545) - provide most of the remainder of manufacturing employment.

Two-thirds of these factory jobs are located in Uniontown and Connellsville.

The outlook for the area is better today than at any time in the recent past. During this period of labor shortages and high unit labor costs prevailing in many of the Nation's labor market areas, this economic activity area may regard its unemployed and underemployed workers as an important asset in attracting new sources of employment to the area.

JEANNETTE-GREENSBURG is an economic activity area in Westmoreland County just to the north of the Mount Pleasant-Uniontown economic activity area, and with a population of 87,500 is fifth in size among the Southwest District's twelve activity areas. Unlike its neighbor to the south, the Jeannette-Greensburg area is one of the fastest growing sections in the Commonwealth. Both Greensburg (population 18,100 in 1967) and Jeannette (16,900 in 1967) have continued to grow during the fifties and sixties, a period in which many central city populations have either remained unchanged or declined. Surrounding townships such as Hempfield, Unity, and Penn have grown dramatically during the same period.

Part of the key to this growth is close proximity to Pittsburgh. Suburban growth has spilled out along U. S. 30 into the Jeannette-Greensburg area.

In keeping with the high proportion of urban population in most of the Southwest District's activity areas, 85 percent of the people in the Jeannette-Greensburg area live in the two central cities or the surrounding urban fringe. Only an estimated 13,500 people live in the hinterland.

In contrast with its neighbor to the south, the Jeannette-Greensburg economic activity area has not suffered with the decline in mining, an industry which has not been particularly prominent in its economy. Instead, it has a relatively stable manufacturing base with jobs for more than 13,000 people. The four leading industries are stone, clay, and glass (2,600 employees), non-electrical machinery (2,400), fabricated metals (2,100), and primary metals (2,000).

In addition, the area is thought to be one of the growing white collar communities developing in conjunction with office, medical, education, and research activities in the greater Pittsburgh area. The degree of importance these kinds of employment have achieved is difficult to pinpoint, but one indication of Pittsburgh's influence is that in 1960 a seventh of Westmoreland County's workers traveled to Allegheny County for employment.

Some of these new white collar jobs are being created within Westmoreland County, especially in research and development. Three major laboratories near the Jeannette-Greensburg activity area are the Mellon Institute lab at Bushy Run in Penn Township, the Westinghouse lab near Waltz Mill and the recently completed first building of Alcoa's $30 million facility in Upper Burrell Township.

An indicator of the growing prosperity of the area was the increase in retail sales between 1958 and 1963. In the Jeannette-Greensburg area there was a 24 percent gain while the State was increasing by only 13 percent.

WASHINGTON is an economic activity area in central Washington County 25 miles south of Pittsburgh, the site of the Whiskey Rebellion in 1791, the home of the oldest college west of the Allegheny Mountains - Washington and Jefferson College - and the center of an 84,000 population. Washington and Canonsburg are the area's two economic activity centers with a combined population of about 33,000; the surrounding urban area has a population of about 37,000. The remaining 14,000 inhabitants live in the hinterland.

Washington County shares the characteristics of neighbors in both Fayette and Westmoreland Counties in that both manufacturing and coal mining have long histories here. Like Fayette County, about 10,000 miners lost their jobs between 1950 and 1966 in Washington County, but in contrast coal production has remained almost stable at 14 million tons annually. Today, Washington County remains the county with the largest number of miners in the State - 4,300 - and the largest coal producer as well.

Unlike Fayette County, it had more manufacturing than mining jobs even back in the late forties and early fifties before mining employment went into its steep decline. Today, the manufacturing base in the County has shrunk due largely to the closing of steel works in the Monongahela Valley.

In the City of Washington, industrial development activities are meeting success. Recently, an electronics factory providing 837 jobs and a paper board manufacturer with 264 jobs opened. Other leading employers are primary metals (2,143 jobs in 1966), stone, clay, and glass (2,123), and electrical machinery.

As the County seat, Washington is a modest governmental center which attracts professionals whose work is closely related to government functions. Its appeal to white collar workers, however, appears to be its location at the intersection of I-70 and I-79 of the Interstate highway system. Once the final links of I-79 are completed into Pittsburgh, the Washington economic activity area will have a similar commuter appeal to that enjoyed today by Jeannette and Greensburg in Westmoreland County.

As the activity area becomes suburbanized, the character of employment opportunities will probably alter particularly as the demand increases for modern public facilities and services. At the same time, obsolete plant equipment will require modernization to avoid closing of inefficient facilities as occurred in a local glass plant in the fifties.

BUTLER is an economic activity area centered on the City of Butler, 30 miles north of Pittsburgh on Pa. 8. Despite the absence of good highway connections to the Pittsburgh economic activity area, this activity area has developed a strong base of heavy industry in part from the abundant nearby natural resources - coal, gas, limestone, and oil.

The entire activity area covers almost two-thirds of Butler County and includes 72,000 people. It is the City of Butler (21,000 population) and the urban fringe (25,000 population) that is the center of activity, however. For this 46,000 people and the additional 26,000 living in the rural hinterland, the highly specialized production of iron and steel sheets (4,100 jobs), railroad car manufacture (3,100 jobs), stone, clay, and glass (1,000 jobs), and petroleum products (900 jobs) are the economic basis of their communities. Three large plants in the economic activity center account for 7,300 jobs, three quarters of the manufacturing total in the Butler economic activity center.

These industries are particularly sensitive to fluctuations in the national economy so that potential instability has afflicted the local economy much the same as it has the steel economy of the Pittsburgh economic activity area. During the late fifties, both steel strikes and nationwide economic recessions pushed unemployment in the Butler labor market as high as 12 percent, while by contrast, the same area has enjoyed rates below 3 percent since the mid-sixties.

New sources of employment are being sought by local officials to soften the economic dependence of these widely fluctuating industries. In this effort, since 1960, about 1,600 new jobs have been added in different industrial categories.

Population changes in Butler County appear to present a paradox similar to its neighbor, Beaver County. In both counties, there was marked growth during the fifties. Butler grew by 17,300 between 1950 and 1960, but during the sixties, as with its neighbor, growth seems to have halted. Unlike Beaver, current population estimates show no drop. However, the excess of births over deaths for the 1960-65 period shows there was out-migration of 5,900.

During the 1960-66 period when population was failing to grow, manufacturing employment expanded 35 percent from 11,100 jobs throughout the County to 15,000, with railroad car production, primary metals, non-electrical machinery, fabricated metals, and glass registering the largest gains. In contrast to Beaver County, Butler County's new manufacturing jobs of the sixties do not represent a return to previously achieved levels of employment, nor can it be argued that they offset losses in mining and agriculture.

Bituminous coal is relatively important in that about two million tons are mined annually, yet fewer than 500 miners are at work in underground and strip mines. And oil production totals about 128,000 barrels annually in the County.

INDIANA-BLAIRSVILLE is the economic activity area eighth in size in the Southwest District with a population of 49,000. More than two-thirds of this population lives in three communities and their urban fringes - Indiana (19,000), Blairsville (7,900), and Homer City (6,500). The remaining 15,600 people live in the rural hinterland of farms, coal mining communities, and Christmas tree plantations. Indiana is advertised as the Christmas tree capital of the world and is also the Indiana County seat as well as the home of Indiana University of Pennsylvania.

The Indiana economic activity area is sixty miles northeast of Pittsburgh in the middle of bituminous coal fields that have figured predominantly in the County's development and linked this activity center closely with the steel industry in both Pittsburgh and Johnstown. As with other areas which prospered from coal mining, the collapse of the industry has caused unemployment throughout the County. The magnitude of the problem has been mitigated, however, by both industrial development and expansion of the local University.

In 1951, Indiana County had 8,800 people employed in mining and manufacturing. About 6,000 of these jobs were in mining. In 1966, the County had 6,700 employed in mining and manufacturing - but only 1,700 were miners. Interestingly, total coal production in 1966 was the same as in 1951 even though it took far less miners to produce it.

The increases in manufacturing employment came in instruments, machinery, apparel, and food processing. While this job growth in factories reflects the success of industrial development programs, it has not compensated completely for the losses of mining jobs. In Indiana, for example, where 2,400 of the County's 4,900 manufacturing jobs are found, half of the factory jobs are held by women. Thus, this economic activity area has suffered from the difficulty of job losses for men and the inability to create new sources of employment for them.

As elsewhere in bituminous coal mining areas, these job losses are held responsible for the out-migration of the fifties and sixties. Between 1950 and 1960, Indiana County lost 10,800 people and between 1960 and 1965, an additional 7,100 left, according to State Planning Board estimates.

Two positive forces at play in this economic activity area are the development of mine-mouth electric generating facilities and the rapid growth of Indiana University of Pennsylvania. The electric generating facilities, as mentioned in the Turnpike Local Development District chapter, have resulted from development of high voltage, low-loss electric transmission lines which make it cheaper to generate electric power in the coal fields than to ship the coal to power plants near cities where the power is to be consumed. Three such plants all but circle Indiana and promise a steady market for years to come for the 2.7 billion tons of recoverable coal reserves in the County.

The enrollment at Indiana University of Pennsylvania increased by 4,500 between 1959 and 1968. This growth has not only stimulated construction activity in Indiana both on campus and in the community, but has been responsible for most of the 1,000 increase in government employment registered in the County.

LATROBE is an economic activity area with a population of 40,000 located ten miles east of Greensburg. As is the case with much of the Southwest District, it is highly urban with 90 percent of its inhabitants living in Latrobe and the surrounding urban fringe.

There are other similarities as well. Traditionally, like the industrial valley communities around Pittsburgh, it has been self-contained and provided most of the work opportunities for its residents. It, too, has had most of its employment in primary metals. In 1966, 4,600 of the 9,000 manufacturing jobs in the economic activity area were in primary metals, and the other two leading employers were non-electrical machinery (1,800) and stone, clay, and glass (900).

Even with these similarities, the Latrobe economic activity area has not shared a history of job losses typical of the District's steel centers. In Latrobe itself, employment in primary metals, fabricated metals, and non-electrical machinery increased by 150 between 1950 and 1960 according to U. S. Census reports; this occurred at the same time other communities were suffering severe job losses in these key industries.

Latrobe thus stands in contrast to many of its neighbors in the Monongahela and Beaver Valleys where many steel workers were idled by automation. Some of the explanation for this difference probably lies in the fact that the plants around Latrobe are relatively small - the largest steel mill having only 1,600 employees in contrast to the great steel works where 6,000 employees is considered moderate size. In fact, the 4,600 primary metals jobs in the Latrobe economic activity area are distributed through 12 plants, while the 1,800 fabricated metals jobs are found in 21 plants. Thus, the activity area may be dominated by a single kind of employment, but it is distributed among many competing companies so that the community's fortunes are not tied to those of an individual corporation.

Latrobe and Derry Boroughs are the centers around which population growth in the economic activity area has been occurring. Derry, with 3,700 people in 1950, lost 300 people by 1960; Latrobe increased 100 from its 1950 population of 11,800. During the same period, Derry Township, north of Latrobe, increased by 600, while Unity Township, which is on the western and southern edges of the economic activity area and bisected by U. S. 30, grew by more than 3,000.

The wide disparity in growth rates between boroughs and townships is best explained by the availability of land that can be easily developed. In Latrobe, a fifth of the land is undeveloped primarily because it is in steep hillsides, but in Unity Township very little of the seven-eights of the area which is vacant offers any obstacle to development. So future development can be expected here as in the recent past.

In Unity Township, manufacturing employment has increased along with population. Between 1958 and 1966, for instance, manufacturing jobs increased from 226 to 782 while the number of plants increased from 7 to 26.

Second to manufacturing as a source of employment in the Latrobe economic activity area is retail and wholesale trade. Latrobe clearly dominates this activity as revealed in the 1963 Census of Business where it recorded $27.8 million in retail sales while the rest of the activity area had less than $10 million. There were at the same time approximately 1,500 persons employed in both retail and wholesale operations in Latrobe, but local officials have voiced concern about the Borough's retail trade future because of competition from shopping centers.

KITTANNING-FORD CITY is an economic activity area in central Armstrong County which contains approximately 33,500 people and lies 45 miles northeast of Pittsburgh on the Allegheny River. Its early settlement was stimulated in part by local iron furnaces, but these soon gave way to glass and clay products manufacturers. Locally found clays supply the refractories and brick and pottery plants scattered throughout the economic activity area and a now exhausted supply of fine sand caused a plate glass plant to be built at Ford City.

Kittanning and Ford City are the principal urban concentrations in the economic activity area, and along with surrounding urban fringe areas contain about 26,800 people. Kittanning, the county seat, with a population of 6,800, is slightly larger than Ford City with a population of 5,400. Both communities lie on narrow flood plains and lack developable land for expansion.

County population losses have been occurring since 1940 when a peak of 81,000 was achieved. Much of the loss occurred outside the Kittanning-Ford City economic activity center as a result of mining losses. Between 1950 and 1966, about 2,200 mining jobs disappeared although during the same period annual mining production increased by 1.1 million tons.

Within the economic activity center itself, Kittanning has been losing population while Ford City has shown some slight increases. While stone, clay, and glass industries specializing in the production of flat glass, glass products, bricks, and ceramic plumbing fixtures with about 2,900 jobs are the principal sources of employment, this total is down considerably from the middle fifties when a single glass plant had about 4,000 employees. Other minor industries are apparel with 180 workers and chemical fertilizers with 175 employees.

During the fifties, half of the County's farmers turned away from agriculture for their livlihood, and added to the losses in mining and manufacturing, the County's economy entered a period of high unemployment and economic deprivation from which it still has not fully recovered. Nearly one in five persons was out of work during 1958 as a result of adverse national economic conditions and a major local strike. These rates have declined considerably during the sixties, although in 1967 a relatively high 5.6 percent unemployment rate was reported for the County while the State rate had dropped to 3.4 percent.

Bright spots in the local economy include continued high coal production which is in part assured by the construction of a mine-mouth electric power generating plant at Elderton near the Indiana County line. Expansion of a steel mill near Leechburg and growth of Nuclear Materials and Equipment Corporation at Apollo have widened employment opportunities. Similarly, the conversion of an abandoned limestone mine into a plant for growing mushrooms has created the world's largest single mushroom producer.

A high proportion of the County's residents have traditionally been drawn to jobs in nearby Westmoreland and Allegheny Counties, and this commutation is expected to increase with completion of the Allegheny Valley Expressway to Kittanning. It is also expected to aid development officials in the Kittanning-Ford City area in attracting new sources of jobs.

WAYNESBURG is an economic activity area in central Greene County in the southwestern corner of the State 47 miles from Pittsburgh. The Waynesburg economic activity area is comprised of Waynesburg (population 5,200 in 1960), an urban fringe of 4,500, and a rural hinterland of 7,600. This relatively large rural hinterland gives the activity area the largest proportion of rural population in the District.

This highly rural character derives from the fact that mining and agriculture have been the major sources of employment in Greene County. In contrast to most of the District's other economic activity centers, manufacturing employment provides less than 700 jobs - only about 6 percent of total County employment - and half of these manufacturing jobs are held by women.

The County remains highly dependent on coal mining and is second in production to neighboring Washington County. Despite the fact that the number of miners has declined by 5,500 since 1951 to about 3,400 in 1968, the outlook for the industry is considered good because the County boasts about half the reserves of the rich Pittsburgh seam. Indeed, the only new railroad built in decades has recently been completed in Greene County to serve expanding mining operations. It is, thus, small surprise that Greene County's coal production in 1966 equalled its 1950 production when almost three times as many men were at work.

Yet, the decline in mining jobs has deeply affected the local economy since alternative kinds of employment have not been developed. And the drop from 2,400 to 1,400 in the number of farms between 1950 and 1964 added to the numbers of people for whom new jobs were needed.

The bulk of these job losses occurred in the fifties and go far in explaining the decline in population from 45,000 to 39,000 during that decade. Actually, the total population loss (including the loss of natural increase during the period) was 10,700 - almost one in four of the County's people. Waynesburg itself, the County seat, lost only 400 people, bringing its population down to 5,100 by 1960. Since then, State Planning Board estimates reveal little change in the County's population total which hovers around 40,000.

Among the encouraging signs for economic development in the County is the near completion of I-79 north to Pittsburgh. Eventually, this route will be completed south from Waynesburg to Morgantown, West Virginia, and other points, giving Greene County better transportation connections with major centers than it has ever enjoyed before. Already a non-profit group has opened an industrial park near the Waynesburg interchange of I-79 to begin capitalizing on this asset. In addition, a tourist promotion group has been organized jointly with Washington County to help bring in tourist dollars to the area.

Unemployment rates have declined in the late sixties, but this is explained more by departure of workers to other areas than by increase in jobs locally.

ZELIENOPLE-EVANS CITY is an economic activity area in southwest Butler

County. It is the District's smallest center in both area and population, yet with 12,600 people it is one of the fastest growing. Zelienople, Evans City, and Harmony form a triangle inside Jackson Township which is sharing with them the fruits of growth resulting from construction of I-79. By 1960, none of these communities had achieved an impressive size. Zelienople was the largest with 3,284 people; Evans City had 1,825, and Harmony 1,142. Jackson Township had 1,700 people. All of them had grown by at least 10 percent during the fifties, however.

Some of the growth in the Zelienople economic activity area undoubtedly results from the first effects of suburbanization as commuters have moved farther north from Pittsburgh on U. S. 19. Once this route is replaced by I-79, the tempo of development is likely to increase.

Yet, this activity area is distinct from the general urbanization of the greater Pittsburgh area physically because there is a gap in development between the areas. Moreover, Zelienople, Evans City, and Harmony have their own job base. In Zelienople alone there are over 1,300 manufacturing jobs, or more than one factory job for each three citizens, and in Evans City there is one factory job for every four citizens.

Obviously, such a high proportion of factory jobs draws people from surrounding areas into these communities for work and gives the local economy its own reason for existence. Chief among these sources of employment are the manufacture of refrigeration and industrial machinery, copper rolling and drawing mills, and brick and structural clay products. In Evans City, instruments is the leading industrial employer.

The future is promising not alone because of the near completion of I-79 and the expected suburbanization from Pittsburgh.

Just south of this economic activity area the last parcel of land in a new industrial park has just been sold to the fifteenth new firm that will ultimately locate there. Thus, new jobs as well as retention of old ones suggest a growing economic base for the area.

DISTRICT CONDITIONS

THE PEOPLE

The fifties in Southwest Pennsylvania were a decade of substantial employment losses. Despite the big losses in steel making and coal mining, the District's population increased by 180,000 people. In Allegheny County alone, 113,000 of this increase occurred in communities around Pittsburgh. The County's 1,628,000 population ranked it tenth among the Nation's counties in 1960 and gave it 56 percent of the Southwest District's total. Butler and Westmoreland Counties also gained substantially during the fifties, while Beaver County's increase was more modest. Armstrong, Indiana, Fayette, and Greene Counties declined.

The surprise is less that some of the District's counties lost population than that they all did not do so in the face of declining economic conditions. Indeed, in Allegheny County where most of the increase was taking place, parallel increases did not occur in the labor force. It grew by less than 16,000 as the 113,000 total population growth took place.

High unemployment rates in the late fifties appear to explain this slow growth of the labor force. Many unemployed had grown discouraged and stopped seeking new jobs. Thus, the number of people in the labor force dropped from 39.8 per hundred in 1950 to 38.0 per hundred in 1960 in Allegheny County, and this decline occurred during a period of rising labor force participation rates in most other sections of the Nation.

Already migration had resulted in substantial losses in the Southwest District, and Allegheny County, having the largest population, was also the largest loser. It lost almost half of the people who left the District during the fifties and its estimated loss between 1960 and 1965 is even greater.

TABLE 50

OUT-MIGRATION FROM COUNTIES IN THE SOUTHWEST DISTRICT

County	1950-1960	1960-1965	1965-1975
Allegheny	- 85,811	- 111,102	
Beaver	+ 2,225	- 17,110	
Washington	- 16,775	- 11,070	
Westmoreland	- 4,664	- 3,089	
(SMSA Sub-Total)	- 109,475	- 142,371	- 89,300
Armstrong	- 12,005	- 7,028	- 2,500
Butler	+ 1,931	- 5,923	- 1,000
Fayette	- 40,408	- 10,058	- 14,700
Greene	- 10,735	- 585	- 400
Indiana	- 10,785	- 7,163	- 2,200
District Total	- 177,027	- 173,728	- 110,100

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates and projections.

The same is not true for the District as a whole. The counties around the four-county Pittsburgh Standard Metropolitan Statistical Area generally are estimated to have sustained much smaller losses during the 1960-65 period than during the fifties.

The fact that there was migration in the fifties at the same time that there was population growth is, of course, accounted for by the fact that the natural increase (excess of births over deaths) was larger than the population growth. The difference is the number of people who left the District.

These overall numerical differences tell only part of the story. They do not, for example, reveal the age groups in which the migration was most pronounced. Indeed, in Beaver and Butler Counties where there was a slight in-migration overall, there was simultaneously a loss of young people in the 20-29 age group.

In Westmoreland County, the 20-29 age group out-migration exceeded the total County out-migration by two thousand. There a population trade took place in which young adults were leaving while those over 30 and their children were moving in.

Interestingly, the departure of young adults was far from a uniform proportion of the migration from the District's counties. During the fifties, the outlying coal counties had the largest proportions of young people in their migration. Of those leaving Washington County, 47 percent were in the 20-29 age group; in Indiana 42 percent; Armstrong 40; Greene 38; and Fayette 36. At the opposite extreme, Allegheny County's large exodus had only 17 percent of the people in their twenties.

Recent estimates indicate renewed growth of the population; by 1975, the rate of out-migration is expected to be the lowest in recent history. Total population is expected to grow by almost 100,000 during the 1965-75 period and two-thirds of this growth is projected in the four SMSA counties.

TABLE 51

SOUTHWEST DISTRICT POPULATION SUMMARY

County	1950	1960	1965	1975
Allegheny	1,515,237	1,628,587	1,590,000	
Beaver	175,192	206,948	201,000	
Washington	209,628	217,271	214,000	
Westmoreland	313,179	352,629	367,000	
(SMSA Sub-Total)	2,213,323	2,405,435	2,372,000	2,429,500
Armstrong	80,842	79,524	75,900	77,000
Butler	97,320	114,639	115,800	124,300
Fayette	189,899	169,340	165,000	158,000
Greene	45,394	39,424	39,700	40,500
Indiana	77,106	75,366	71,900	74,700
District Total	2,703,797	2,883,728	2,835,300	2,934,000

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates and projections.

EMPLOYMENT

The Southwest District's population kept growing in the fifties in the face of continuing unemployment that hit 11.6 percent in 1958. District rates of unemployment stayed above 9 percent through 1962 before beginning the long decline which led to a 3.4 percent rate at the end of 1967. Interestingly, the decrease in unemployment is only partially explained by the creation of new jobs. For example, the District's number of unemployed dropped from 103,300 in 1960 to 40,900 in 1965, but while this 62,400 decline in the unemployed was taking place, only 24,100 new jobs were being created. The remaining 38,300 people who were jobless in 1960 gave up job seeking or migrated.

Much of this migration and the general sluggishness of the Southwest District economy is directly tied to the steel industry which in the middle fifties dropped from 148,000 employees to 117,000 in two years in the Pittsburgh SMSA. By 1960, employment was up to 121,000, but two years later it dropped to 108,000. Slowly it has grown back to 1960 levels with national prosperity at an all-time high.

The job losses of steel have had to be made up by other industry groups, but manufacturing sectors alone have not been able to do the job. Between 1960 and 1965, the Pittsburgh SMSA lost 5,000 manufacturing jobs. A little over 3,000 of this loss was offset by growth in the five outlying counties of the District.

In addition to losses sustained in manufacturing, employment in agriculture and mining continued to decrease. Mining lost 5,000 jobs and agriculture declined 1,900 in the 1960-65 period.

District employment growth came in other non-manufacturing sectors - especially in services and civilian government employment. There were slight increases in construction, trade, and finance, while transportation, communications, and public utilities continued to decline.

Manufacturing employment in the Southwest District has accounted for about 30 percent of the jobs in recent years. In 1960, it accounted for 31.3 percent of the District's 974,300 jobs, a proportion that declined to 30.2 percent when District employment grew to 1,003,200 jobs in 1965. And a further decline to 28.8 percent is expected by 1975.

Home office workers in downtown Pittsburgh are included among manufacturing workers in employment reports of the Pennsylvania Bureau of Employment Security but are excluded from the County Industry reports prepared by the Pennsylvania Department of Internal Affairs. The manufacturing employment data used here are those prepared by the Department of Internal Affairs and therefore fail to account for about 17,000 non-production workers employed by manufacturing industries away from factory sites.

The special place of manufacturing industry in the Southwest District has been emphasized because of the dominance of high-wage paying industries. Steel, with over a third of factory employment, is a well-known high wage industry, and its high wage scales are complemented by transportation equipment, printing and publishing, and petroleum. Altogether 48.4 percent of the District's manufacturing jobs were in high paying industries in 1960, a proportion about equalled by jobs in the medium wage category. Little change occurred by 1965 and not much more is anticipated by 1975.

TABLE 52

PROPORTION OF MANUFACTURING WORKERS BY WAGE CATEGORIES

Wage Category	1960	1965	1975
High	48.4	48.5	47.1
Medium	48.0	46.6	47.9
Low	3.6	4.9	5.0

Source: Pennsylvania Department of Internal Affairs; Pennsylvania State Planning Board.

The absence of low-wage employment in manufacturing industries suggests that per capita incomes are high. It also suggests that there are few employment opportunities for women since women traditionally find employment in low-wage paying factories. Indeed, by the end of 1966 only a tenth of factory jobs were held by women.

This fact suggests a shortage of job opportunities for women - at least in manufacturing industries. It also suggests that the District is short of factory jobs for unskilled workers. For workers with skills, entry into the District's factories may be relatively easy, but for those lacking skills there may be no easy entry. This condition may account for the recently discovered fact that two income groups are growing in the District - those earning more than $10,000 annually and those receiving less than $4,000.

The growth of service employment in the District is some compensation for the lack of low-wage manufacturing jobs. About three out of every seven servi jobs are in the low-wage bracket, so approximately 6,800 of the 15,400 service jobs created between 1960 and 1965 would have been open to unskilled workers.

There has also been some opportunity for employment in retail and wholesale trade where wage scales are relatively low. For the unskilled, trade and service jobs are the best hope of employment in the Southwest District.

If during the 1960-65 period the District's employment had grown as well as the State's, total agricultural and wage and salary employment would have increased by 63,050. Instead, the total gain was 25,800. Thus, there was a relative loss or downward shift of 37,250 jobs. Of this loss, primary metals was responsible for 10,870 and transportation, communications, and public utilities for 10,380.

Another manner of viewing these employment changes is in terms of the industrial mix and the competitive posture of the District. Industrial mix here simply refers to the proportion of jobs in fast growth, slow growth, or declining industries, while competitive effect relates to the ability of the District to compete with other areas for new jobs.

During the 1960-65 period, the District's 37,250 loss relative to the rest of Pennsylvania was caused overwhelmingly by poor competitive effect. The District's comparative inability to attract new jobs accounted for 33,330 of the downward shift.

TABLE 53

SOUTHWEST LOCAL DEVELOPMENT DISTRICT EMPLOYMENT (IN THOUSANDS)

Industry Group	1960	1965	1975
Agriculture	17.2	15.3	12.2
Mining	22.7	17.7	15.1
Contract Construction	41.5	42.1	51.3
Transportation, Communications, Public Utilities	69.1	63.7	68.4
Trade	171.5	175.4	197.9
Finance, Insurance, Real Estate	34.8	36.0	38.8
Services	125.9	141.3	178.2
Civilian Government	87.6	106.1	142.9
Manufacturing	305.2	303.7	320.3
Food Products	22.6	20.5	16.8
Tobacco	*	*	*
Textiles	0.3	0.5	0.5
Apparel	4.2	5.9	7.3
Lumber, Wood, Furniture	3.6	4.5	4.5
Paper	3.3	3.8	4.5
Printing	10.4	8.7	10.8
Chemicals	7.2	6.4	8.2
Petroleum	1.6	2.0	1.8
Rubber and Plastics	2.6	3.8	4.7
Leather	0.1	0.3	0.4
Stone, Clay, Glass	25.9	24.8	25.4
Primary Metals	126.0	124.2	123.6
Fabricated Metals	35.2	28.2	30.7
Non-electrical Machinery	14.8	21.2	25.7
Electrical Machinery	30.0	27.2	30.7
Transportation Equipment	9.6	12.3	14.6
Instruments	5.0	5.6	6.9
Miscellaneous Manufacturing	2.8	3.8	3.2
Sub-Total Agriculture and Wage and Salary	875.5	901.3	1,025.1
Self Employed	100.8	101.9	85.1
Total	974.3	1,003.2	1,110.2
Unemployed	103.3	40.9	40.2**

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* Fewer than 50 employees.

** 3.5% unemployment rate assumed as point at which out-migration begins.

Source: Pennsylvania Department of Labor and Industry, Bureau of Employment Security; Pennsylvania Department of Internal Affairs; Pennsylvania State Planning Board.

The remaining 3,920 of the downward shift was attributable to the unfavorable industrial mix which was heavily weighted by industries that grew slowly or declined during the 1960-65 period.

Downward shifts of employment that derived from poor ability to compete were significant for the following industries:

Industry	Employment Change Attributed to Unfavorable Competitive Effect
Trade	- 19,730
Fabricated Metals	- 5,520
Primary Metals	- 5,360
Contract Construction	- 3,190
Electrical Machinery	- 3,040
Services	- 2,020

Major losers as a result of the District's unfavorable industrial mix were:

Industry	Employment Change Attributed to Unfavorable Industrial Mix
Transportation, Communications, Public Utilities	- 8,600
Mining	- 7,210
Primary Metals	- 5,510
Fabricated Metals	- 4,010
Stone, Clay, Glass	- 3,170
Agriculture	- 3,160
Food Products	- 2,060
Electrical Machinery	- 1,920

The District's poor competitive position was far from uniform. In some industries, growth occurred in the District faster than elsewhere in the State. Among those in which the District increased its shares of employment were:

Industry	Employment Change Attributed to Favorable Competitive Effect
Non-electrical Machinery	+ 4,160
Civilian Government	+ 3,620
Apparel	+ 1,360
Transportation Equipment	+ 1,200

Important as these upward competitive shifts were, they were all easily offset by the failure of retail and wholesale trade employment in the District to grow at State rates. The Southwest District has more than its share of retail and wholesale employment when gauged against its proportion of Appalachia Pennsylvania's population, but expansion of that employment has failed to keep pace with growth in the rest of the State.

The explanation for the District's slow growth of trade employment undoubtedly lies in the generally lethargic state of the local economy during 1961, 1962, and 1963 when total employment dipped below 1960 levels. Less employment meant less money to attract retailers. Thus, the largest industrial sector of the District grew only 2.3 percent between 1960 and 1965 while in the State it grew 13.8 percent.

While the relative lack of growth of trade was easily the greatest failure of the District economy during this period, several other important industries also performed below the State average. In only two rapid growth industries - civilian government and non-electrical machinery - did the Southwest District have a large concentration of workers and obtain more than its share of jobs.

TABLE 54

SOUTHWEST DISTRICT INDUSTRIES EMPLOYING 20,000 OR MORE IN 1965

Industry Group	1965 Employment	State Growth Characteristic 1960-1965	District Growth Relative to the State
Trade	175,400	rapid growth	below average
Services	141,300	rapid growth	below average
Primary Metals	124,200	slow growth	below average
Civilian Government	106,100	rapid growth	above average
Transportation, Communications, Public Utilities	63,700	declining	below average
Construction	42,100	rapid growth	below average
Finance, Insurance, Real Estate	36,000	slow growth	below average
Fabricated Metals	28,200	declining	below average
Electrical Machinery	27,200	slow growth	below average
Stone, Clay, Glass	24,800	declining	above average
Non-electrical Machinery	21,200	rapid growth	above average
Food Products	20,500	declining	below average

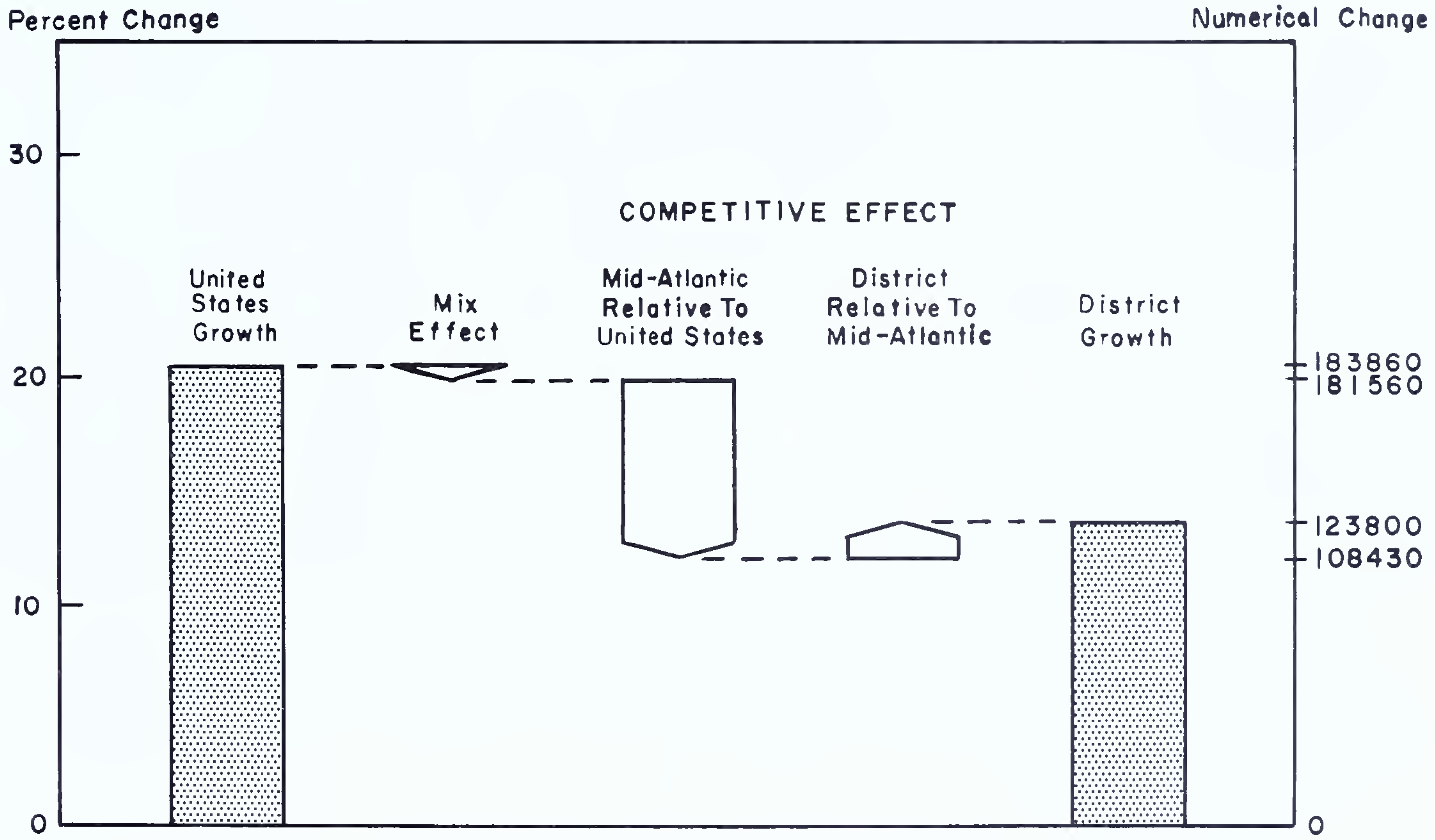
Source: Pennsylvania State Planning Board.

This generally below average performance of the District in the 1960-65 period is summed up by the fact that employment grew only 2.9 percent while the Statewide average grew 7.2 percent. The differential shift table in the Appendix emphasizes a point made earlier - that the slow growth of employment in the Southwest District results almost totally from an inability to compete with the remainder of Pennsylvania for new jobs.

In the larger context of the national economy, the Southwest District would compare even less favorably than in this comparison with Pennsylvania during 1960-65 since Pennsylvania grew more slowly than the national average. Because any area is deeply affected by trends of the national economy, it is helpful to add this perspective in analyzing local conditions. Accordingly, the employment projections for 1975 were subjected to a shift analysis in which national growth rates are the basis of comparison. Since, however, competition for new jobs is keenest among neighboring areas, the competitive effect was determined between the District and both the Middle Atlantic States and the United States.

CHART 15

COMPONENTS OF EMPLOYMENT CHANGE SOUTHWEST DISTRICT 1965 TO 1975



Source: Pennsylvania State Planning Board

If employment expectations for the District were the same as for the Nation between 1965 and 1975, total agriculture and wage and salary employment would increase by 183,860. Instead, the total gain in employment anticipated is only 123,800, resulting in a relative shift downward of 60,060 jobs. Of this net relative change, 96 percent is expected to result from the District's failure to obtain new jobs at the same rates as the rest of the Nation. Significantly, this poor competitive effect is probably due less to the inherent sluggishness of the Southwest District economy than to the fact that it is part of the Middle Atlantic region.

This region is expected to grow more slowly than the Southwest District. In obtaining new jobs, the District is expected to have a significant competitive advantage over the Middle Atlantic region in the following industries:

Industry	Employment Change Attributed to Favorable Competitive Effect
Trade	+ 15,110
Primary Metals	+ 3,860
Transportation, Communications, Public Utilities	+ 3,240
Non-electrical Machinery	+ 2,920
Mining	+ 2,900
Agriculture	+ 2,720
Apparel	+ 2,040

In contrast, the District is not expected to compete effectively with the Middle Atlantic region for new employment growth in other important industries. Among them are:

Industry	Employment Change Attributed to Unfavorable Competitive Effect
Civilian Government	- 8,240
Electrical Machinery	- 4,540
Food Products	- 3,000
Finance, Insurance, Real Estate	- 2,480
Stone, Clay, Glass	- 1,450
Fabricated Metals	- 1,040

Despite the generally negative impact of the Middle Atlantic states on the Southwest District's ability to compete nationally, several industry groups are expected to compete favorably in the national framework although in none of them are relative job increases expected to be great. Agriculture, mining, apparel, printing and publishing, and chemicals in the Southwest District are all expected to exceed slightly national growth expectations.

During the 1965-75 period, the District's industrial mix will probably continue as a subject of deep concern, largely because of the dominance of steel. Yet this mix of fast growing and slow growing or declining industries is expected, on balance, to contribute a loss of 2,300 to the relative downward shift of the District. Close examination of the shift table in the Appendix reveals, however, that this change is expected to result from substantial losses and gains among industry groups which tend to cancel out one another. Losses resulting from high concentrations of slow growing and declining industries in the District are expected to occur in the following industries:

Industry	Employment Change Attributed to Unfavorable Industrial Mix
Primary Metals	- 22,730
Trade	- 10,750
Transportation, Communications, Public Utilities	- 8,280
Agriculture	- 8,180
Mining	- 6,890
Food Products	- 4,260

These losses are expected to be almost offset by gains in rapid growth industries and thereby give only a small negative industrial mix shift. The District's significant rapid growth industries are expected to be:

Industry	Employment Change Attributed to Favorable Industrial Mix
Civilian Government	+ 29,540
Services	+ 17,690
Electrical Machinery	+ 8,710

Even where the District has heavy concentrations of employment in rapid growth industries, it is not expected to grow in these industries at national rates and only in services, construction, and non-electrical machinery will it exceed Middle Atlantic rates. Among slow growth industries with 20,000 or more employees anticipated in 1975, none will exceed national rates of growth although three out of four will exceed Middle Atlantic expectations.

TABLE 55

SOUTHWEST DISTRICT INDUSTRIES EMPLOYING 20,000 OR MORE IN 1975

Industry Group	1975 Employment	National Growth Characteristic	District Performance Expectation 1965-75 Relative to: Mid-Atlantic	United States
Trade	197,900	slow growth	above average	below average
Services	178,200	rapid growth	above average	below average
Government	142,900	rapid growth	below average	below average
Primary Metals	123,600	slow growth	above average	below average
Transportation, Communications, Public Utilities	68,400	slow growth	above average	average
Construction	51,300	rapid growth	above average	below average
Finance, Insurance, Real Estate	38,800	rapid growth	below average	below average
Electrical Machinery	30,700	rapid growth	below average	below average
Fabricated Metals	30,700	rapid growth	below average	below average
Non-electrical Machinery	25,700	rapid growth	above average	below average
Stone, Clay, Glass	25,400	slow growth	below average	below average

Source: Pennsylvania State Planning Board.

Significantly, the District has no declining industry with 20,000 or more employees; rather seven of the eleven leading industries are expected to enjoy rapid growth nationally. Despite that fact, the Southwest District is not expected to compete well with the Nation for new jobs in these rapid growth industries. Still, the proportion of Southwest District employment in them is expected to increase from 49 to 52 percent of the total during the 1965-75 decade while the share of jobs in slow growth industries will drop from 45 to 43 percent.

Development officials are, of course, concentrating on attracting industries where employment growth is most promising. In this effort, the District's existing large shares of employment in such rapid growth industries as non-electrical machinery, fabricated metals, electrical machinery, services, civilian government, construction, and finance, insurance, and real estate will be helpful. The District has specialization upon which to attract additional new jobs in contrast to some districts where these employment sectors are small.

In addition, the District's growing concentration of research laboratories and university training provide a spawning ground for innovative ideas and promise a future of new line rapid growth industries. This fact is perhaps the most promising characteristic of the local economy today. It does not however, promise directly new jobs for unskilled workers for whom entry into the job market appears somewhat difficult today.

NATURAL RESOURCES

Of the mineral, agricultural, and forest resources in the Southwest District, bituminous coal has for decades been the most valuable. In 1966, it accounted for about $297 million of production, down only slightly from the $317 million production in 1956. During this period there were, of course, drastic changes in mining techniques which halved the 30,400 mining work force.

Production changed greatly in some counties and slightly in others; it increased in four and decreased in five. Fayette was the biggest loser as the value of production plunged from $32.7 million to $4.6 million. Allegheny was next with a decrease from $44.2 million to $31.8 million. Armstrong and Greene experienced the largest increases while Washington, although it declined slightly in the 1956-66 period, still led the District as well as the State in production.

TABLE 56

VALUE OF BITUMINOUS COAL PRODUCTION 1956 AND 1966 (MILLIONS OF DOLLARS)

County	1956	1966
Allegheny	$ 44.2	$ 31.8
Armstrong	9.4	21.9
Beaver	1.8	1.2
Butler	7.8	9.4
Fayette	32.7	4.6
Greene	68.8	80.8
Indiana	36.4	33.6
Washington	95.5	91.7
Westmoreland	20.0	21.3
Total	$317.0	$296.7

Source: Bureau of Mines Minerals Yearbook, 1956 and 1966, U. S. Department of the Interior.

Two major formations - the Monongahela and the Allegheny - contain the principal coal beds of the District. In the southwestern part under Greene, Allegheny, Washington, and Fayette Counties are mines two to five hundred feet deep where the rich Pittsburgh seam dominates the coals of the Monongahela rock formation. Typically, the Pittsburgh seam is six to eight feet thick while other coals in this formation - Sewickley, Waynesburg, and Redstone - range from three to six feet. This formation pitches down toward the southern part of the District. North of Pittsburgh it is largely eroded away except on fairly high ridges where exposed seams are either stripped or mined from drift shafts.

The Pittsburgh seam produced the famous Connellsville coking coal now about exhausted in Fayette County, and mines in Greene, Washington, and Allegheny Counties continue to produce this coal for steel mills. Interestingly, most of the coal in this part of the District is owned by steel companies, power companies, and a single large coal company. While the steel and power companies are using their reserves as needed, the large coal company is considered to be in an excellent position to produce gasoline, oil, and natural gas from the coal because its large holdings lend themselves to the technology involved.

In contrast, coal reserves in the northern part of the District are owned by many interests and this haphazard ownership has resulted in spotty and unsystematic mining. Here five seams in the Allegheny formation which lie under the Pittsburgh seam farther south rise near the surface and are mined largely in drift mines. Their prime use is for electric power generation. Since single large holdings do not exist in this area, the likelihood of conversion into petroleum products is considered remote.

The outlook for the coal industry is considered bright since coking requirements are expected to remain at current levels, power generation requirements will be increasing, and new uses are very promising. However, expanded employment is not expected because the coal industry has responded to competition from other fuels by reducing production costs with automated equipment. Introduction of further labor saving equipment is predicted for the future as well.

During the past 130 years, 6.5 billion tons of coal have been mined from the District, helping both to build the steel industry in the Pittsburgh region and, in certain places, to foul the landscape with unrestored strip mines and culm piles. By 1965, about 59,500 acres of stripped land were in need of reclamation in the District.

The Pennsylvania Department of Mines and Industries has estimated that reclaiming 192 stripped areas, flushing nine mines threatening surface subsidence, and extinguishing eleven mine fires and 31 coal refuse bank fires in the District will cost $41 million. Some of this work has already been started with financing through State appropriations and grants from the Appalachian Regional Commission.

In addition to these problems, abandoned mines discharged an estimated 256 million gallons of water daily into the District's streams. Among those most affected are the Conemaugh, Kiskiminetas, Monongahela, Youghiogheny, and lower Allegheny Rivers as well as Loyalhanna and Raccoon Creeks.

As the District's remaining 18.5 billion tons of coal are mined, some of these problems may grow more severe. However, State laws now require mining and back-filling of strip pits according to plans which will prevent acid discharges into streams.

Of the other mineral deposits in the District, the most important are oil and gas, clays and shales, limestones, and yet undeveloped salt deposits. Shallow sand oil and gas fields extend under several counties in the District. Oil is now found in Butler, Allegheny, Washington, Greene, and Beaver Counties and is refined for lubrication products. These deposits are not extensive and therefore have small potential for future development.

Gas fields are found in these same counties and also extend eastward into the District's other counties. These shallow fields, like the oil fields in the District, are not considered extensive enough to promise much future development, but in Indiana, Westmoreland, and Fayette Counties, there are deep sands which promise a greater potential. As yet, however, they are undeveloped.

Clay and shale deposits suitable for many ceramic purposes are widespread in the Southwest District. Good fire clays are found in Beaver and Lawrence Counties and are molded and fired into special shapes for furnace linings, pouring-pit refractories, and mortar mixes. Other heavy clay products made from fire clays include building and face brick, vitrified sewer pipe, and flue tile. In Allegheny, Armstrong, and Westmoreland Counties, both refractory and heavy clay products are produced primarily from Lower Kittanning plastic clay, deposits of which are limited and must be mined underground.

In Beaver and Lawrence Counties, the Lower Kittanning bed is also the source of the clay used for refractory and heavy clay products, but here it is usually strip mined along with coal.

One potential for which technology is still to be developed is the use of clay for alumina extraction, that is, as the ore for aluminum. The District's shales are thought to have this potential since similar shales in France are being used to produce aluminum. In addition, both shales and clays may be used as light weight aggregates in construction.

Limestones have been important as flux stone for the steel industry in both the Pittsburgh and Youngstown regions. The best deposits are Vanport limestone found north of Pittsburgh. While the District's reserves are extensive, the outlook for production is not one of growth. Introduction of the Basic Oxygen Furnace in steel production is prompting a shift from limestone to dolomite and resulting in lowered tonnages of limestone shipped to steel mills. Other limestones such as the Loyalhanna lack the high carbonate quality of the Vanport and may be used in the future as a "non-skid" road aggregate, but the Vanport tends to make roads slick and therefore seems to have little potential for highway construction.

Salina salt is found extensively under Beaver, Washington, Greene, and Fayette Counties at depths exceeding 6,000 feet. Current technology permits mining of such deposits by artificial brining rather than by deep shaft mining, but to date there is no commercial exploitation of these deposits. Because salt is a basic ingredient of the chemical industry in Ohio, West Virginia, New York, and Michigan and is the foundation upon which the Gulf Coast chemical industry has been built, these deposits are considered to have a similar potential in the Southwest District.

Natural brines are also encountered in the District in the process of oil and gas well drilling. These brines contain bromine, iodine, sodium, and other elements sought by the chemical industry.

Sandstones, sands, and gravel are widely present in the District. The Connoquenessing and Homewood members of the Pottsville sandstone have been quarried as glass sand in Westmoreland County and are today mined in Fayette, Washington, and Beaver Counties. In addition to use by glass manufacturers, the District's sands are of use as industrial sands for casting steel, aluminum, and brass, and they serve other purposes such as grinding and polishing, blast sand, furnace sand, engine sand, and filtration sand. Both sandstone and unconsolidated sands are considered to have significant potential in highway construction because of "non-skid" characteristics.

Ground water is abundant in all counties. In Allegheny County, it is being consumed at close to maximum yield, but elsewhere supplies for additional municipal and industrial uses generally are available.

Many of the District's mineral resources now provide limited employment opportunities and contribute modest production to the local economy. Coal is the most important mineral produced in all the District's counties except Beaver. Nevertheless, the presence of other mineral resources is considered by economic geologists to be one of the District's great development assets which through the genius of research now flourishing around Pittsburgh may soon be put to work.

TABLE 57

1966 VALUE OF MINERAL PRODUCTION IN THE SOUTHWEST DISTRICT

County	Value	*Minerals Produced in Order of Value
Allegheny	$32,983,953	coal, cement, clays, sand and gravel, stone
Armstrong	25,138,199	coal, clays, sand and gravel, stone, lime
Beaver	3,639,419	sand and gravel, coal, clays
Butler	12,480,210	coal, cement, stone, lime, sand and gravel
Fayette	8,993,792	coal, stone, clays, sand and gravel
Greene	withheld	coal, clays
Indiana	withheld	coal, clays
Washington	withheld	coal, stone
Westmoreland	withheld	coal, sand and gravel, stone, lime, clays
Total	$341,830,000	

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*Excludes value of natural gas, natural gasoline, LP gases, petroleum, and gem stones.

Source: Pennsylvania Bureau of Topographic and Geologic Survey.

An estimated two million acres of the Southwest District were in commercial forest land in 1964. From this 48 percent of the District's land, 63.9 million board feet of sawtimber and about 55,000 cords of pole timber were cut in that year. Only one percent of the sawtimber and two percent of the pole timber were softwood. Indiana, Fayette, and Westmoreland were the leading sawtimber counties while Washington and Greene (the leading coal producing counties) were the largest pole timber producers. (One of the important uses of pole timber is as mine supports.)

TABLE 58

1964 SAWTIMBER AND POLE TIMBER PRODUCTION IN THE SOUTHWEST DISTRICT

County	Board Feet of Sawtimber	Cords of Pole Timber
Allegheny	442,500	4,653
Armstrong	3,418,000	3,811
Beaver	250,000	1,157
Butler	8,488,000	2,759
Fayette	14,523,000	6,286
Greene	5,721,500	10,066
Indiana	16,534,000	7,211
Washington	2,637,000	11,973
Westmoreland	11,886,500	6,752
Total	63,900,500	54,668

Source: Pennsylvania Department of Commerce.

As a result of serious overcutting in Fayette and Allegheny Counties, the District's forests in 1954 were barely sustaining themselves with a growth of only 148,000 board feet greater than the cutting. By 1964, the overcutting had decreased and the District's forests were sustaining themselves with a substantial growth of more than 12 million board feet greater than the cutting.

At the same time, the 154,000 cord balance of pole timber in 1954 increased to 315,000 by 1964, with the small deficits of Greene and Washington Counties replaced by comfortable surpluses.

These forest resources are at least part of the basis of the District's 7,700 forest related manufacturing jobs in lumber, furniture, and paper. Over half of this total is employed in paper production, and most of that industry is found in Allegheny County.

Among wood using industries attracted to the District in recent years are a paper box plant, an envelope manufacturer, a veneer producer, and a factory making shipping containers. However, by 1966 wood using industries accounted for only 2.5 percent of all manufacturing jobs. In several individual counties this proportion was slightly higher, but only in Fayette County where a tenth of manufacturing jobs were in forest based industries was there a substantially higher proportion. In Butler (1 percent) and Beaver (0.4 percent) Counties these jobs were almost nonexistent.

While the District's forest resources are extensive and individual counties rank among the top ten in the State in species such as black birch, yellow birch, hickory, white oak, red oak, yellow poplar, and black walnut, expanded employment in forest based industries is not expected.

Farming in the Southwest District provided 1.5 percent of the employment in 1965 and returned to farmers $80 million for the commodities produced. Of this amount, livestock products accounted for $53 million of the total. This total marks a continued trend in the District in which the proportion of total farm income earned by livestock has dropped from 80 percent in 1949 to 72 percent in 1959 and to 66 percent in 1965.

The Pennsylvania Department of Agriculture estimated that in 1966 there were 13,420 farms in the District. This was a third less than the number in 1957, indicating that the decline in farming, characteristic of the fifties, continues unabated in the sixties. (District farms declined by 38 percent between 1950 and 1959.)

If other characteristics of the District's agriculture in the fifties also prevail during the sixties, this decline in the number of farms is only partially explained by consolidation into large farms. During the fifties when the number of farms exceeding 220 acres was growing 10 percent throughout the State, the number grew but 3 percent in the Southwest District. The inference is that a great proportion of people were simply giving up farming. Indeed, total farm acreage between 1950 and 1959 declined 24 percent, which was 50 percent faster than the decline throughout the State.

The complicated economics of farm production are often blamed for the demise of family farms and undoubtedly the droughts of the early sixties brought financial hardships for many District farmers. Much land in farms has only been marginally productive, and this fact coupled with harsh economics and adverse climate has prompted further abandonment of farming.

While dairying has been the largest single source of revenue for District farmers, accounting for two-fifths of all farm income, horticultural specialities are growing in importance because of the urban demands of the Pittsburgh economic activity area. In addition, the District's counties have important specialities: Greene is first among the State's counties in sheep production; Washington is second in sheep, fourth in beef cattle, and tenth in production of cattle and calves; Indiana is first in Christmas trees and third in nursery products; Butler is fourth in Christmas trees; Allegheny is fifth in cut flowers; and Westmoreland is tenth in turkeys.

Specialization is the clear trend of agriculture today. In the Southwest District that trend also is expected to prevail as stronger farm business units are organized. Mechanization in agriculture, as in coal mining, is likewise expected to continue so that no expansion of farm employment is likely.

MANPOWER

Of all the resource problems faced by community leaders, easily the most critical is the proper use of the talents of people. In the past, much of this responsibility has been left to chance. During periods of prosperity, laws of supply and demand fitted workers to jobs. In periods of unemployment, job creation has been emphasized to help people again earn a livelihood.

The past two decades in Appalachia Pennsylvania and elsewhere have shown that fitting workers to jobs is exceedingly complicated and that during periods of prosperity there are some who remain outside the economic system. And for these displaced by automation, it is almost impossible to create jobs for workers with obsolete skills. Other factors - race, sex, age, education - affect employability, so that success at job creation by local leaders does not guarantee employment for those out of work. Nor does it promise retention of existing workers who may feel that greater opportunities exist elsewhere.

All of these problems have faced leaders of the Southwest District. Automation of mining, steel making, and agriculture displaced workers and made their skills surplus and obsolete. In addition, many of those jobless had scanty educations, some were well past middle age, and others encountered prejudice when they sought new employment.

At the other extreme, the District was locked in competition with other areas for the highly trained specialists needed to man the research labs, universities, and corporate offices of its changing economy. It could neither afford to have its workers idle nor to lose the talented leadership necessary for improvement.

Out of these complex problems a heightened sense of public responsibility has risen with both State and Federal governments giving material aid to local governments and community organizations. Unemployment compensation programs have been strengthened as have State employment services. Statistical reporting has been vastly improved so that officials can have sharper knowledge of who is jobless. Economic development efforts to create new jobs have been aided especially by the Bureau of Industrial Development in the Pennsylvania Department of Commerce and through the financing of new plants by the Pennsylvania Industrial Development Authority.

TABLE 59

OCCUPATION OF THE EMPLOYED AND UNEMPLOYED IN 1960
(PERCENT DISTRIBUTION)

Occupation	Pennsylvania Employed	Appalachia Pennsylvania Employed	Southwest District Employed	Southwest District Unemployed
Professionals	10.69	10.42	11.64	2.2
Farmers	1.46	1.83	0.79	0.1
Managers	7.04	6.72	6.90	1.6
Clerical	14.32	12.81	14.68	8.9
Sales	7.43	7.49	8.06	5.6
Craftsmen	14.98	15.54	16.39	16.8
Operatives	22.66	22.97	18.65	26.4
Household Workers	1.85	1.53	1.64	1.2
Service	8.21	8.25	8.63	8.5
Farm Laborers	0.93	1.06	0.55	0.8
Laborers (ex.farm)	5.81	7.17	8.01	21.1
Occ. not reported	4.60	4.21	4.06	6.9

Source: General Social and Economic Characteristics of the Population, 1960: U. S. Bureau of the Census.

Already the District's labor force compares favorably with the rest of Appalachia Pennsylvania in that it has larger proportions of workers as professionals, clerks, and managers and a smaller proportion of operatives. Its proportion of laborers is rather large, however, pointing to part of the untrained labor force.

A disproportionately high share of those out of work in 1960 were laborers and operatives, suggesting that the unskilled and semiskilled were hit hardest by unemployment. This is consistent with the fact that operatives in steel mills and coal mines were the first to be replaced by machines. It also explains the emphasis that is being placed on technical training of students and retraining of adults.

During the 1962-67 period, job training gave new skills to 13,674 workers in the District. A wide variety of courses designed to fill existing employment vacancies have been offered. Among the largest classes have been electronics mechanics, general and precision machine operators, chemists assistants, surgical technicians, and nurses aides.

In the vocational-technical schools of the District, courses are being tailored to the occupational needs of local businesses. Concurrently, the State Department of Public Instruction is estimating future occupational requirements of local economies so that students trained today will fit the needs of the economy a decade in the future. In this fashion, leaders hope to avoid having workers trained in skills that are disappearing.

This heightened concern about worker training - both immediate and in the future - is represented clearly in the District's investment in vocational-technical education. Today, there are eight area vocational-technical schools in the District, four of which are in Allegheny County. Two are in Westmoreland while Armstrong and Fayette Counties have one each. Some of these programs have been installed in old buildings in order to get them started. Five of these - three in Allegheny and two in Westmoreland - are to get new buildings at total cost of $19.8 million. These new buildings will accommodate 4,660 students. Fayette and Armstrong Counties have already completed new buildings at a cost of $3,094,000 which serve 1,700 students.

Indiana and Washington Counties have schools in the process of planning or construction. Allegheny, Westmoreland, and Fayette Counties plan additional new buildings. These seven buildings (two are to be built in both Washington and Westmoreland Counties) will cost $18.7 million and serve 4,416 students.

Beaver and Butler Counties have not yet applied to the Department of Public Instruction for approval of attendance areas for vocational-technical schools - the initial step required for establishing these facilities. They are, however, among the leaders in establishing locally sponsored community colleges.

The Butler County Community College has already constructed several new buildings on a 288-acre campus at a cost of approximately $2 million. The ten year development program calls for $7 million worth of additional construction. Fall enrollment in 1968 included 700 full time and 300 part time students. In Beaver County, construction is not quite as far along but approximately 1,000 full and part time students were enrolled in the Fall of 1968. One proposed new building - for classrooms and administrative offices - estimated to cost $5 million is now in the planning stage.

Thus, the thrust of local efforts in these two counties has also been to make better training available to more students. In some cases there will be similar emphasis on technical courses, but the major difference between vocational-technical schools and the community colleges is that one is high school level and the other college.

The other District community college is the Allegheny County Community College. This, the largest in the State with a 7,500 Fall 1968 enrollment, has three campuses with facilities valued at about $4 million. Expansion of the three branches, including construction of new buildings to replace temporary structures, will cost an estimated $32 million.

In all there are 27 higher education institutions in the Southwest District (including four branches of The Pennsylvania State University and one branch of Indiana University of Pennsylvania) providing education for about 54,000 students (1966-67). Fourteen of these are privately controlled and educate two-fifths of the District total while the remainder are publicly owned or aided.

Nine of these public and private institutions (including the community colleges mentioned above) have applied for funds from the Appalachian Regional Commission to help build $136.3 million of new facilities. All but $20.7 million of this total is planned by the publicly owned and aided schools.

Already the Appalachian Regional Commission has made seven grants for higher education facilities in the District - to Allegheny General Hospital School of Nursing, Geneva College, Seton Hill College, Waynesburg College, Indiana University of Pennsylvania, and two branches of The Pennsylvania State University. About $2.2 million has already been allocated to the District's higher education expansion efforts by the Appalachian Regional Commission.

All of these educational programs attest to the general belief that unemployment and underemployment are best combatted by educated and skilled individuals who, when necessary, can create their own opportunities. They further highlight the generally accepted notion that education enriches a person's life and that the more and better educated an area's citizens are, the more everyone benefits economically and socially. Not that education has become a nostrum in the Southwest or any other district in Appalachia Pennsylvania, but it is recognized as the key to individual success.

DISTRICT GOALS AND STRATEGY

The obvious connection between education and employment in the Southwest District is seen by the fact that one of the District's first goals is the improvement of employment opportunities while the top priority program is the improvement of vocational-technical education and manpower development. Thus, better training is seen as a long-term key to eliminating chronic unemployment of the past two decades. Other programs - some of them not requiring capital investments - are also viewed as important in achieving the District's goals.

District officials have pinpointed 16 goals and have suggested means of achieving them. In the words of the District they are:

1. Adequate Employment Opportunities For The Future Population Of The Region
    - Remove, or compensate for, labor market imperfections by:
        - Improving the availability of information on job alternatives
        - Improving labor-management relations
    - Subsidize industries which can absorb workers with present skill levels
    - Remove labor market discrimination by:
        - Rehabilitating the handicapped
        - Subsidizing jobs which will absorb the handicapped
        - Removing discrimination in hiring procedures
2. Increased Future Investment Opportunity
    - Investigate and promote unique regional investment advantages
    - Increase the availability of credit on a more competitive basis for:
        - Fixed investment

        - Working capital
        - Venture capital
    - Subsidize investment
    - Make operating subsidies available
    - Grant tax concessions
    - Create a research community
    - Improve the information flow on the production costs in the region
    - Improve the selection and quality of industrial land
    - Remove freight rate inequities

3. Stability Of Employment

    - Increase grants-in-aid for anti-recessionary control by State and Federal government
    - Subsidize industries which are in accord with a diversification plan
    - Encourage industries employing women or secondary workers
    - Modernize existing plant facilities (in order to eliminate extensive fluctuations characteristic of more obsolescent facilities)
    - Encourage greater geographic elasticity (transiency) of the region's labor force
    - Support measures to accomplish better balanced seasonal employment

4. Growth Of Median Family Income

    - Increase labor productivity through such measures as:
        - Retraining and general adult education
        - Improving vocational-technical education for prospective entrants to labor force
        - Increasing availability of health services
        - Improving quality of housing
        - Implementing retention programs for prospective school dropouts

- Remove labor market discrimination by:
    - Rehabilitating the handicapped
    - Subsidizing jobs which will absorb the handicapped
    - Removing discrimination in hiring procedures
- Foster greater employment of secondary workers among families
- Increase wage rates to the extent that they can be increased other than at the expense of employment

5. Efficient Allocation Of Resources Between The Private And Public Sectors And Within The Public Sector

- Analyze the supply of capital available to the public sector from taxes, borrowing, and grants-in-aid from State and Federal governments
- Utilize public opinion survey techniques for gauging public attitude on willingness to pay taxes and incur public debt to obtain services
- Increase the quality of public capital through the construction or improvement of:
    - Transit facilities
    - Streets, roads and parking facilities
    - Educational facilities
    - Medical and public health facilities
    - Cultural and recreational facilities
- Increase the quality of public services through the reorganization, where necessary of:
    - Traffic control
    - Protective services
    - Educational services
    - Sanitation and water management
    - General government

Revise collective bargaining to produce competitive wage patterns

Increase the availability of credit on a more competitive basis for:

- Fixed investment
- Working capital
- Venture capital

Foster the efficient spatial distribution of activities through:

- Vigorous regional, county and local planning
- Effective land use controls
- Informal professional guidance to private developers

6. Decent And Varied Housing Opportunities At A Wide Range Of Prices In Many Locations

Provide a full range of public utilities and municipal services in diverse locations

Enforce building and health codes throughout the region

Promote technological research and experimentation in the use of new building materials

Lower construction costs through use of new materials and better design and arrangement of housing units

Adopt and enforce strict zoning wherever needed in the region

Acquire land in scattered ownerships through public action for resale to private developers

Provide incentives for effective planning and control in all programs of local financial assistance

Explore new ways of financing housing such as new sources of equity and mortgage funds

Encourage co-ops and other forms of non-speculative housing units, the costs of which are to be shared by the owners

Design housing units with "fixed" furniture (thus reducing the complexity and costs of moving, and increasing mobility)

Encourage more multifamily housing, particularly garden apartments and row housing

Encourage more rental housing of all types, large and small, single and multifamily

Develop a suburban rental market

Develop and use more refined techniques of analyzing the housing market and needs

Engage in administrative action against racial discrimination in all housing

Revise ordinances which limit new design ideas and the use of new materials

Promote redevelopment of blighted areas suitable for residential use

Encourage rehabilitation and conservation of all residential areas suitable for continued residential use but which do not qualify for redevelopment

7. Adequate Educational Opportunities

Make fuller utilization of school buildings

Experiment with portable classrooms and new types of classroom facilities

Develop within commuting distance of every high school graduate in the region institutions which will:

  Offer two-year terminal programs for students not going on to a four-year college career

  Offer transfer programs for students who do wish to complete a four-year program

  Serve as a technical institute for the community serving local needs for vocational and subprofessional education

Reorganize school districts for better and more efficient provision of education opportunities

Study future needs of educational facilities at all levels

Reserve land for future educational needs

Broaden the means of providing public and private financing of educational facilities

8. A Safe And Healthful Environment

Construct medical and public health facilities available to all

Reorganize protective services

Reorganize traffic control

Reorganize sanitation and water management

Reduce blight through the adoption of comprehensive blight elimination programs

Design and build areas with safety in mind (safe walkways separate from vehicular movement, good street lighting, safe intersections, etc.)

Enforce legislation against air and water pollution

Increase health and social welfare research to test present methods and to produce new methods for tackling problems

Increase programs for older people which will prevent the onset of physical or mental degeneration

Provide adequate outdoor areas and other facilities for passive and active recreation

9. A Rich Cultural Environment With Ample Opportunities For The Creative Use Of Leisure Time

Provide public and private subsidization of cultural activities

Increase the quality of public capital for the construction of cultural facilities

Encourage the use of art forms in appropriate locations

Establish a system of community cultural centers throughout the region

Promote cultural courses in elementary and secondary schools

Provide better information through mass media on cultural opportunities and facilities available in the region

10. A Convenient And Efficient Integrated Transportation System

Explore new types of transportation for people and goods (such as rapid transit, hovercraft, etc.)

Subsidize mass transit

Restrict automobiles entering congested areas during peak traffic hours

Provide parking on the periphery of congested areas with connecting shuttle bus service

Consolidate privately-owned transit lines to provide more efficient and convenient service with lower operating costs and lower fares

Increase the coverage and frequency of public transportation service in suburban areas

Provide high-speed rapid transit lines on unused railroad rights-of-way where warranted by adequate population densities

11. A Reasonable Diffusion Of Amenities And Basic Community Facilities

Coordinate comprehensive planning and renewal programs at local, county and regional levels

Adopt and enforce effective land use controls for all parts of the region

Adopt and enforce subdivision regulations requiring developers to provide amenities as a part of new housing developments

Reserve sufficient land for future amenities and basic community facilities

Encourage cooperation among adjacent communities toward the joint provision of amenities and basic community facilities

Determine the demand for various types of amenities and community facilities.

12. Sufficient Recreational Opportunities For Personal Enjoyment

Construct recreational facilities

Reserve sites for active and passive recreation in areas of potential urbanization

Identify outstanding natural and historical features for future regional park sites

Bring about cooperative planning and financing of recreational sites and facilities among the communities of the region

Determine the demand for various types of recreational facilities and programs

Provide easy transportation access to parks and to other recreational facilities

Make available a full range of active and passive recreational activities in and near urban areas

13. A Rational Location For Those Activities And Functions Which Can Serve The Region More Efficiently And Effectively From A Single Location

Make studies to determine rational locations for center functions

Discourage irrational competition among jurisdictions for facilities and services

Provide county and regional subsidies for regional-serving activities

Reserve land in appropriate locations for construction of cultural and recreational facilities serving the entire region

Improve public transportation to central places

Adopt and enforce effective land use controls for all parts of the region

14. Efficient Arrangement Of Public Utilities And Services

Coordinate comprehensive planning and renewal programs at local, county and regional levels

Restrict development in areas that are difficult to service

Provide utilities and services designed to serve several adjoining communities

Construct facilities for anticipated future needs

Determine future utility and service needs and plan for their most efficient development (including water, sewers, gas, electricity, telephone, and waste treatment facilities, etc.)

Reserve land for future facilities and utility rights-of-way

15. Protection And Proper Utilization Of Physical Features And Natural Resources

Coordinate comprehensive planning and renewal programs at local, county and regional levels (including land planning on a watershed basis that precedes water resources planning and stream renewal)

Adopt legislation to prevent the abuse of land, water and air resources (such as slag heaps, unreclaimed strip mines, air and water pollution, etc.) and provide strict enforcement of said legislation

Increase technical and financial assistance by Federal and State governments to localities for the construction of water, sewer and waste treatment facilities

Adopt and enforce effective land use controls for all parts of the region

Reserve vacant land until such time as it is needed for that use for which it is best suited

Encourage compact urban development in areas easy to service

Seek productive uses of idle land

Give special attention to planning for the rehabilitation and constructive utilization of slope areas through such measures as:

Slope renewal in blighted areas

Reforestation of cutover and stripped hillsides

Reserve sufficient land for open space in urbanizing areas

Provide sufficient facilities for recreation

Acquire significant natural and historical sites

16. Aesthetically Attractive Community Appearance

Engage regional (or county) staff designers who will:

- Assist other agencies (such as parks and streets departments, housing authorities, etc.)
- Help small communities and rural areas
- Advise private individuals and developers

Place utilities underground whenever feasible

Adopt programs to prevent early blight

Encourage the formation of community improvement associations

Provide more educational programs on the value and need for home improvement

Provide more credit availability for neighborhood rehabilitation and conservation programs

Establish minimum design and architectural standards as agreed upon by the design professions

DISTRICT PROGRAM PRIORITIES AND PROJECT RECOMMENDATIONS

MANPOWER DEVELOPMENT AND VOCATIONAL-TECHNICAL EDUCATION are given first priority among programs urged by District leaders. The extent of District involvement in these programs was indicated in the section about manpower. Also listed there are the proposed projects and their tentative costs.

SEWER AND WATER SYSTEM IMPROVEMENTS are given second priority in the District. The importance and need for aid in construction of sewage treatment plants and collection systems is seen by the fact that in Fiscal Year 1968 the Pennsylvania Department of Health approved grants totalling about $6.3 million to 23 communities in the Southwest District with a total population of 244,000 people. When completed, the total cost of these projects will be about $23.9 million.

In Fiscal Year 1969, the Department of Health has approved $16 million in grants for 10 communities. These projects when completed will involve total expenditures of about $59.3 million.

An additional 74 projects have been listed by local officials. Of this number, 33 are in Allegheny County and most of the remainder are in Fayette, Indiana, and Beaver Counties.

Water system improvements also have been recommended by local officials. A detailed list of needs in Indiana County has been prepared which covers 13 projects including three reservoirs at an estimated total cost of $22.8 million.

In most other District counties, the improvements to existing water systems which are most needed are the extensions of systems to new residential sections. This is the need in Allegheny County around Pittsburgh, around the City of Butler, and around Washington, Canonsburg, and Avella in Washington County. Other systems need major improvements as in the case of four communities in Beaver County - South Heights, Center Township, Monaca, and Potter Township. Construction of systems needs to be undertaken in Bullskin, Menallen, and Upper Tyrone Townships in Fayette County. Cost estimates of these needs have yet to be developed.

HIGHWAYS AND ACCESS ROADS to industrial and recreation sites are given third priority by District leaders. Among the most important proposed new roads, these leaders have recommended early construction of the Monongahela Valley Expressway from Pittsburgh to Brownsville and other communities to the south. This is by far the most important road proposal for the Monongahela Valley economic activity area and accounts for almost half of the estimated $75.5 million highway funds needed in the area. This $33 million project is now in the design stage. Eleven other projects have also been recommended by Washington County leaders.

In the Washington economic activity area, four important highway proposals are being planned including an interchange with I-79 at Hendersonville and a bypass at Canonsburg, each estimated to cost $1.6 million.

In northwestern Washington County, a bypass on Pa. 18 around Burgettstown is planned at a cost of $1.5 million and reconstruction of U.S. 22 is underway. Local leaders have recommended in addition the construction of an expressway in the corridor of Pa. 18 in two stages at a cost of $43 million and the reconstruction of Pa. 50 around Avella.

In neighboring Fayette County, recommended projects include five highway improvements, three access roads to industrial parks, and four access roads to recreation areas. The construction of an interchange for U.S. 119 and Legislative Route 26099 and a new bridge for the Legislative Route over railroads in North Union Township at combined costs of $1.5 million has been proposed. New alignment for Pa. 381 from Donegal in Westmoreland County to Farmington in Fayette County is also recommended.

Road improvements with particular significance for industrial development include providing a connection between U.S. 119 and Legislative Route 26206 in South Connellsville to improve access to the glass company with the largest employment in the County and improvement of Legislative Route 26047 to a planned industrial park in North Union Township. Access roads are needed for the Great Meadows Amphitheater and for Ohiopyle State Park.

Indiana County leaders have proposed eight highway improvements. Of these proposals, only the U.S. 119 improvement has reached the preliminary engineering stage. This is the major north-south route in the County and can be reconstructed for an estimated $28 million. Other proposals are reconstruction of Pa. 56 from Indiana Borough to Johnstown, reconstruction of U.S. 422 across the County, bypass construction for Pa. 56 around Homer City, upgrading Pa. 286 from Aultman to Indiana Borough, similar improvement to Pa. 217 from Blairsville to Pa. 286, and a new bridge across the Conemaugh River north of New Florence. Total cost of these proposals (including improvement of U.S. 119) is estimated to be $44.4 million.

Greene County officials support two major road proposals - extension of the Monongahela Valley Expressway at least as far south as Point Marion to replace Pa. 88 and construction of an east-west expressway across the County to replace Pa. 21.

In Westmoreland County, leaders have expressed particular interest in having U.S. 119 upgraded throughout its length in the County.

Elsewhere in the District major improvements are either well underway or far along in the planning stages. Among the most important is progress on I-79, the West Virginia to Erie route. All the sections of this highway are completed in Butler and Washington Counties. In Allegheny County, all sections are either under construction or programmed by the Department of Highways for construction during the 1967-73 period at a cost of $108 million. In Greene County the sections north of Waynesburg are either completed or under construction, while the remaining 14.1 miles south to the West Virginia state line are programmed for construction at a cost of $24.9 million.

The Beaver Valley Expressway running from Pittsburgh up the Ohio and Beaver River valleys will ultimately connect with I-80 south of Sharon in Mercer County. Some sections are already under construction in Allegheny and Beaver Counties and another 18.4 miles are programmed for the 1967-73 period at a cost of $42 million.

The Allegheny Valley Expressway is a similar type route designed to give more of the District's river valley communities rapid access to the Pittsburgh economic activity center. Portions of this route in Allegheny County, planned from Pittsburgh to Kittanning, have been completed. The remaining 27.9 miles to Kittanning are scheduled for construction in the 1967-73 period at a cost of $32.6 million.

The construction of the Monongahela Valley Expressway, mentioned by leaders in Washington County as being crucial to economic development, lags somewhat behind these other river valley routes. In addition to the six miles under construction in Allegheny County, another 13.4 miles of this route are scheduled for construction in Allegheny and Washington Counties. Even completion of this work at a cost of $47.6 million will leave gaps in the route between California Borough and Pittsburgh.

Eleven other major highway improvements scattered throughout the District involve important bypasses around Pittsburgh, Kittanning, Uniontown, Waynesburg, Canonsburg, and Indiana. These are already scheduled in the 1967-73 program period at a cost of $215.7 million.

HIGHER EDUCATION, discussed above in connection with manpower development, is given fourth priority among important programs in the Southwest District.

INDUSTRIAL DEVELOPMENT is the fifth priority program in the District. A seventh of all new jobs created by industrial development activities in the State during 1965-67 were created in the Southwest District. There were 19,603 jobs created in 143 new and 227 expanded plants in the District. Allegheny County with 7,405 new jobs and Westmoreland County with 4,756 new jobs were the clear leaders with 62 percent of the total.

The Chrysler Corporation recently announced it will construct an automobile assembly plant near New Stanton, Westmoreland County, to employ about 4,500 persons.

Industrial development has, of course, been a major concern of District leaders for many years as is indicated by the fact that over $16 million has been secured from the Pennsylvania Industrial Development Authority to help finance projects costing $43 million in 74 plants with an estimated employment of 10,976 and payrolls valued at more than $52 million annually.

In addition to this financing, the Regional Industrial Development Corporation (RIDC), a broadly based local development organization, has loaned $12 million to new and growing firms in the District since 1962 resulting in about 5,000 new jobs.

A key to industrial development activities in the Southwest District as in other parts of Pennsylvania has been establishment of industrial parks complete with utilities.

At the proposed Thorn Hill industrial park in Allegheny County, access roads 2.8 miles long are needed to speed development. Other access roads and site development are recommended in Monroeville for the proposed atomic research plant there, and for the RIDC and Pittsburgh BJD sites. A research center should be constructed in the Pittsburgh area for transportation, pollution, materials, and new fields of science. In Armstrong County, an access road estimated to cost $100,000 is needed into the existing MACADO industrial park, while in Westmoreland County the development of two sites has been recommended.

In Fayette County, leaders have proposed seven new industrial parks, five of which require major site development and three need access roads. In Greene County, an industrial park near Waynesburg needs sewage treatment facilities, water supply, and access roads.

At an existing industrial park in White Township, Indiana County, site improvements estimated to cost $400,000 are needed. In addition, local leaders have proposed three other industrial parks - at Saltsburg, Homer City, and Blairsville - which will require approximately $625,000 for site development.

No improvements have been suggested at Washington County's two existing industrial parks, but three new parks are proposed. At one of the proposed parks in Donora, work has already begun toward installing $1.5 million in improvements. In addition, a new bridge into the area is needed to improve access. Location of the other two proposed parks has yet to be decided although one is recommended for the northwestern part of the County around Burgettstown and another in the Washington City area.

In Beaver County, local leaders are seeking annual funds of approximately $75,000 for promotion and studies relating to problems of industrial development. An industrial park should be developed in upper Beaver County.

URBAN RENEWAL is given sixth priority by District leaders. There are 65 existing projects throughout the District estimated to cost about $300 million. Of this total, 29 are in Allegheny County; although they are but 44 percent of the total, they account for 81 percent of the funds being spent.

New urban renewal projects proposed in Indiana and Washington Counties will add $45.8 million to the total. About a quarter of this cost will go for five projects in Indiana County - in Indiana Borough, Clymer, Homer City, Blairsville, and White Township. Others are to be scattered throughout Washington County - in Washington, California, Donora, and McDonald with one each and two each in Canonsburg and Charleroi.

AIRPORT development is the seventh priority program. Greater

Pittsburgh Airport, the largest in the Appalachian Region, is fifteenth among the Nation's airports in air carrier operations. In 1966, it had 61,636 scheduled departures during which 1.9 million passengers enplaned. As the District's only airport with scheduled airline service, it is being improved to accommodate "jumbo jets" when they are brought into use by airlines. In this way the Greater Pittsburgh Airport is expected to continue handling 40 percent or more of the total passenger traffic in the Appalachian Region.

Other airports in the District include 47 privately owned and nine publicly owned airfields. Improvements have been recommended at 11 of these in the Pennsylvania Aeronautics Commission's 1967-72 Airport Plan and three new airports have been proposed as well. Nine of the eleven improvements (including a runway extension at the Latrobe-Westmoreland Airport, facilities at the J. S. Thompson Memorial Airport, and improvements at the Connellsville Airport) were also advanced by District leaders as important projects needed for industrial development, and one of the new airports - the one needed in Armstrong County - has been urged by local development officials also. While cost estimates are not available for all fourteen proposed projects, seven of them including the new Armstrong County Airport will come to about $5 million. This does not include the expenses necessary for additional land for development, runway construction, and terminal building improvements at the Greater Pittsburgh Airport.

MINE PROBLEM CORRECTION including the prevention of mine subsidence, the extinguishing of mine fires, and the reclamation of stripped land ranks eighth among priorities in the Southwest District. Already the Appalachian Regional Commission has contributed $1.3 million to efforts to stop 25 mine fires and restore 3 stripped areas. Twenty-two of the mine fires are in

Allegheny, Washington, and Westmoreland Counties. One of the strip mine reclamation projects is in Allegheny County and the other two are in Moraine State Park in Butler County.

Another seventeen projects have been proposed by District leaders. These include 11 mine fires, one area where subsidence is occurring, and five projects to reclaim mined out areas. Cost estimates are available for the subsidence which is in South Pittsburgh. It will cost approximately $1.3 million.

Eight of the eleven fires needing attention are located in Fayette County while the reclamation projects are located in Allegheny, Beaver, Butler, Indiana, and Washington Counties. The project in Beaver County is to be converted to recreation use once completed.

HOSPITALS are given ninth priority by District leaders. Of 66 hospitals in the Southwest District, 50 provide general care. The District's general care hospitals contain 16,430 beds and admitted 385,786 patients during 1967. In general, they operated slightly below capacity with a District average of 85 percent occupancy throughout the year.

The District's six psychiatric hospitals contain 10,823 beds. These long-term care facilities admitted fewer patients annually - 3,758 in 1967 - and had a slightly higher occupancy rate - 88 percent - than general care facilities. Three children's hospitals have 479 beds with 8,944 admissions and seven other special hospitals with 1,413 beds had 12,704 admissions.

Hospitals in the Southwest District provide 43,488 jobs, making this a larger source of employment than any manufacturing industry except primary metals. The total payroll in 1967 was about $197.5 million. Total operating costs including payrolls were about $307 million.

The Appalachian Regional Commission has made grants of $526,000 to four District hospitals to help expand facilities. Three of the four went to improvements in mental health facilities in Allegheny, Beaver, and Butler Counties. The fourth grant was for general care facilities at the Butler County Memorial Hospital.

Seventeen additional projects have been proposed by District leaders. Total costs of ten of them, including both major expansions and new hospitals, would be about $34 million. These include a proposed new hospital at Kittanning, two new County Homes, new medical centers at Dixonville and Saltsburg, and four major expansions at Rochester, Beaver Falls, Oakdale, and Charleroi. The other seven for which cost estimates have yet to be developed include two hospital expansions, three mental health facilities, a county home, and a building for the united health services in the Monongahela Valley.

In addition, a vocational-rehabilitation facility for crippled children should be constructed in Pittsburgh.

As the discussion of health facilities in the Pittsburgh economic activity area indicated, the District's health care facilities offer a broader range of services than are available anywhere else in the State except Philadelphia.

FLOOD CONTROL WORKS are ranked tenth by District leaders among important programs. The U.S. Army Corps of Engineers has built five reservoirs in the District which have already prevented an estimated $322.9 million in flood damages in the District. Two additional reservoirs - on Raccoon Creek and on Chartiers Creek - are proposed by the Corps of Engineers and will cost an estimated $38.6 million. These facilities will tie into the District flood control system and will provide other uses such as recreation, water supply, and land stabilization.

In small watersheds, the U.S. Department of Agriculture's Soil Conservation Service develops multiple-purpose projects which serve flood control, water supply, recreation, and land reclamation and stabilization. Four such projects have been authorized. Cross Creek in Washington County is in execution while work has been completed on one reservoir in the Dunlap Creek Basin in Fayette County. In one of the other two - Wheeling Creek - work is just beginning, while in the Harmon Creek Basin in Washington County planning has not yet been completed.

Three additional watershed projects have been advanced in the Southwest District. These include a 21-structure development on Connoquenessing Creek in Butler County, a two-reservoir project on Sewickley Creek in Westmoreland County, and a seven-structure development on the Upper Loyalhanna Creek in eastern Westmoreland County. The total cost for these three projects is an estimated $25.7 million.

Two other watershed developments in Westmoreland County - Jacobs Creek and Jacks Run - will cost approximately $5 million dollars if undertaken.

HOUSING improvement is the eleventh priority program of Southwest District leaders. It is a goal these development officials share with State, Federal, and local governmental units since housing conditions are a national concern.

The most recent Districtwide data available on housing conditions were reported in the 1960 Census of Housing. At that time one in four housing units in the District had inadequate plumbing - a good measure of the comfort offered by a dwelling. Much of the District's rural housing was deficient. The proportion with all plumbing was 54 percent in Greene County, 57 in Indiana, and 59 in Fayette. Beaver with 81 percent contained the largest proportion of housing units with all plumbing and was followed by Allegheny with 79 percent.

In 1960, there were 223,763 units in the Southwest District which lacked some or all plumbing fixtures.

Since then, of course, both new construction and demolition have been in progress in every county. Yet it is abundantly clear that serious deficiencies remain. Housing market studies have been conducted in both Pittsburgh and Uniontown-Connellsville pointing to the need for housing not only for low-income families, but for moderate-income families as well.

A promising means of providing housing for moderate-income families has been developed through low-interest loans available from the Federal Housing Administration. Nonprofit organizations wishing to sponsor projects can obtain financing for both sale and rental housing, and the Appalachian Regional Commission is empowered to provide grants to help the nonprofit groups obtain professional help in initiating projects.

In the Southwest District, 13 projects have been proposed for aid under this program. Three of these containing 338 units have been proposed in Pittsburgh by three separate organizations. In neighboring Beaver County, five groups are seeking aid for projects containing 550 new units and 50 rehabilitated units. Two groups in Washington County, and one each in Indiana, Fayette, and Greene also seek help in getting projects underway.

Since this provision was enacted in 1967, no groups have yet been able to begin construction as a result of aid granted by the Appalachian Regional Commission. But the Commission learned in its research that housing was not only needed because of substandard conditions, but because it stimulates economic activity in a unique fashion. It found, for example, that in the delivery of $1,000 of housing 204 hours of work is involved and 72 of that is in actual construction. The remainder goes to related fields such as transportation, trade, manufacturing, and finance. It concluded that stimulation of the housing industry offered a major opportunity for creation of jobs and raising of incomes in Appalachia. And since this program simply provides seed money to meet initial expenses, it promises to create much activity at little expense.

ELEMENTARY AND SECONDARY EDUCATION are given twelfth priority by Southwest Local Development District officials. Public and private schools in the District enrolled 706,921 pupils in 1966-67, which was 24 percent of the State total. This was about the proportion of both public and private school students as well. State appropriations, total expenditures, professional personnel, and number of classrooms in the District were all similarly about one fourth of the Pennsylvania total just as the Southwest District's population is 24 percent of the State's.

These rather consistent proportions of the State totals for the District conceal the fact that among the individual counties in the Southwest District some wide variations exist. For example, 76 percent of the private school students of the District are found in Allegheny County while only 50 percent of the public school students live there. At the other extreme there are very few private school students in Greene, Indiana, and Butler Counties.

And a comparison of expenditures per pupil reveals that there was a range in 1965-66 from $488 in Fayette County to $585 in Butler County. In between were wealthy counties like Allegheny ($570), Westmoreland ($540), and Beaver ($533).

The school system, aside from its prime goal of training the young, is an important economic stimulant. In the Southwest District, elementary and secondary education employed 26,452 professionals during 1965-66 and spent $308.8 million for all educational expenses.

Augmenting such a vast system requires either money or ingenuity, and since funds available to the Appalachian Regional Commission must be spread over many programs, development officials have sought to aid the educational system with innovative programs that might help all school districts at modest cost.

One such project is the instructional materials center established at California State College which received an Appalachian Regional Commission grant of $30,000. Another is the Clelian Heights School for Exceptional Children in Westmoreland County which received a grant of about $74,000.

LIBRARIES are the District's thirteenth priority program. There are 80 existing libraries in the Southwest District containing 4.2 million books. The largest is the Carnegie Library in Pittsburgh which contains 44 percent of the District's volumes. Vast as these holdings are, they do not meet the standards established by the State Library in the Department of Public Instruction. Only in Allegheny County are library resources - books, buildings, staff, and salaries - close to the standards. There they are adequate for 97 percent of the County population. At the opposite extreme, Indiana County's facilities are adequate for only about 19 percent of its population and the District's other counties also are seriously deficient. The existing facilities are spread so thin in these counties that in effect 31 percent or 881,900 people are not provided for. When these needs are converted to population, Westmoreland leads all the counties of Appalachia Pennsylvania with facilities lacking for 269,760 of its residents, or 76 percent of its population.

Although the Southwest District can boast leadership in many educational facilities, it does not contain any of the nine Appalachia Pennsylvania counties listed as meeting the State's library standards in 1967.

In the past, Appalachian Regional Commission grants totalling

$610,000 have been given to the Pittsburgh East Liberty Branch of the Carnegie Library, Butler Public Library, Monessen Public Library, and the Uniontown Public Library.

District leaders have proposed 14 library improvements, eight of which are in Beaver County, three in Indiana County, and one each in Allegheny, Armstrong, and Fayette Counties. Of the total, half involve new facilities and the other half additions to existing buildings. Cost estimates are available for six of them - three new buildings and three expansions - and total $1,450,000.

OUTDOOR RECREATION facilities are given fourteenth priority in the Southwest District. Existing facilities include six state parks containing 13,293 acres. Five of them (figures are not available for Laurel Mountain) attracted 1,755,000 visitors in 1966.

These parks are distributed unevenly - three are in eastern Westmoreland County; Armstrong, Greene, and Beaver have one each. Seven new ones are proposed to fill in the gaps in the ring around Allegheny County. Two will be in Indiana, two in Fayette, one in Washington, one in Butler, and one in Butler and Armstrong Counties.

In addition, new outdoor recreation areas are to be developed as part of both Corps of Engineers impoundments and Soil Conservation Service watershed development projects. Thus, in addition to facilities at reservoirs on the Conemaugh River, Crooked Creek, Loyalhanna Creek, Mahoning Creek, and the Youghiogheny River, new ones are planned for the Big Sandy Creek and Raccoon Creek reservoirs.

In watershed projects on the Upper Loyalhanna Creek and the Connoquenessing Creek, other new water related recreation facilities will be developed by the Soil Conservation Service.

Allegheny County will continue to expand and improve its park system. Among proposed improvements in the District are seven local parks in Beaver County. Another eleven county parks - three in Beaver, three in Washington, and five in Westmoreland - have also been proposed. In Westmoreland County, the land has already been acquired and development costs for the five are variously estimated at five to ten million dollars over a five to ten year period. Those in Washington County are estimated to cost $1,200,000 for development costs. The land has already been purchased.

In Fayette County, the development of four parks - three local and one State Park - will be stimulated through construction of an access road to each.

PUBLIC BUILDINGS is the fifteenth District priority. Like other public investments in fixed assets, there is a continuing renovation, expansion, and improvement of public buildings that house public offices and equipment, contain records, prisoners, and the indigent, or provide facilities used by the people.

In the Southwest District there are 515 cities, boroughs, and townships in addition to uncounted school districts and municipal sewer and water authorities - any of which have building needs from time to time.

CONCLUSION

The development philosophy and strategy, the program priorities, and the project recommendations of the Southwest District may be viewed as a milestone for this area that has contributed so much to the Nation's past industrial strength. And while further development of ideas proposed in the goals and strategy section will broaden the District's efforts, this plan itself can be thought of as a considerable feat.

Few states can boast such an organized attempt to look at their development needs or agreement on specific proposals to meet them. Yet, the nine-county Southwest District with 2.8 million people has a population larger than 28 of the Nation's states and it has worked to achieve that end. In such agencies as the Southwestern Pennsylvania Economic Development District, the Southwestern Pennsylvania Regional Planning Commission, and the Regional Industrial Development Corporation, the District's leaders and professional technicians are continuing their efforts to improve their development strategy and implement recommendations in tangible, precise programs.

CENTRAL SUSQUEHANNA BASIN LOCAL DEVELOPMENT DISTRICT

Centre, Clinton, Columbia, Juniata, Lycoming, Mifflin, Montour, Northumberland, Perry, Snyder, and Union Counties have formed the Susquehanna Economic Development Association. With 6,300 square miles of area, this eleven-county Central Susquehanna Basin Local Development District contains a sixth of the land of Appalachia Pennsylvania while its 557,500 population is a quarter of the people.

Its area is marked distinctly by the ridges and valleys which change from a northeasterly to an easterly direction as one travels on U.S. 522 from Mount Union to Selinsgrove or from Bellefonte to Williamsport on U.S. 220. On the west and north behind the Allegheny Escarpment lie the Allegheny Highlands, while to the east and south the remainder of the District is dominated by the rocky, forested ridges separated by fertile valleys which attracted the earliest settlers and still support scattered farming communities.

The earliest settlements were started in the 18th Century by intrepid Scotch-Irish frontiersmen. It was during the first half of the 19th Century, however, that settlement patterns were established. Since this was a period when water transportation was the key to development, communities sprang up along the District's rivers - the Juniata and the West and North Branches of the Susquehanna. During the brief canal era, 1830-60, canals were built along the rivers reinforcing the economic justification for these trade centers, and the railroads that supplanted the canals followed these river routes as well because the grades were minimal and they connected the existing population centers.

Thus, Lewistown, Lock Haven, Williamsport, Lewisburg, Selinsgrove, Sunbury, Danville, Bloomsburg, and Berwick were founded beside the rivers. Only two population centers of the District - Shamokin-Mount Carmel and State College -

developed away from the river valleys, and for each there was a special reason: anthracite coal deposits at Shamokin-Mount Carmel and an act of the legislature in 1855 leading to the establishment at State College of the institution which eventually became The Pennsylvania State University.

Except for the coal mining in southeastern Northumberland County and southern Columbia County and limestone quarrying in Centre County, the District's mineral production has never been impressive. During the 19th Century, much of the District was dotted with small iron furnaces using local ores, charcoal from the extensive forests, and water power from the many streams, but as technology of iron and steel evolved, the District lost out to other centers in the State where good coking coal was more readily available and better quality ores were obtainable.

In addition to the fertile valleys between the ridges which attracted farmers, the District's forests brought a reckless breed of exploiters who denuded the ridges and Allegheny Highlands, building Williamsport in the process.

By the beginning of the 20th Century, the lumbering era was over, leaving to the early conservationists the job of restoring the ravaged woods. Much of the stripped land was acquired by the State and put under protection as State Forests. Much of the District's woodland is regenerating, but instead of being covered by pine, hemlock, and other coniferous stock, hardwoods now predominate. Today, with 40 percent of all State Forest land, the Central Susquehanna Basin District has a much larger proportion of State Forests than any other section of the State. This covers a sixth of the land area - mostly in Clinton, Lycoming, and Centre Counties.

The decline of the lumber industry was to the Central Susquehanna Basin District what the decline of coal mining and the drop of steel employment were to other parts of Appalachia Pennsylvania decades later. Population growth in Lycoming and Clinton Counties slowed down sharply after 1900 while in Snyder, Union, Perry, Juniata, and Montour Counties small declines occurred. Only Columbia and Northumberland Counties were tied to the economy of the day through coal mining and railroading and thus grew at a robust pace. The rest of the District began the search for a new economic existence which has been led by Williamsport, the District's largest city.

The Central Susquehanna Basin District contains a fairly diversified manufacturing economy which is augmented by a large institutional work force in state hospitals, colleges, and penal institutions. This 20,100 institutional employment largely explains why the District's proportion of service workers exceeded that in all of the State's other local development district, and it is this ten percent of District employment that has contributed stability and continuity during periods of economic recession.

Although service work is often associated with growing urban concentrations, the Central Susquehanna Basin District is made up of small and moderate size communities. Only a quarter of its population lives in the ten communities with more than 10,000 population, and of this ten, only Williamsport (population 41,000) and State College (population 22,000) exceeded twenty thousand in 1960. The other eight - Lock Haven, Berwick, Bloomsburg, Lewistown, Coal Township, Mount Carmel, Shamokin, and Sunbury - are in the ten to thirteen thousand class. These are the economic development centers of today.

When these small communities are viewed as urban and economic concentrations instead of separate political units, they may be grouped into eight economic activity areas. The District's largest economic activity area does not contain its largest city. Rather the urbanization along the branches of the Susquehanna River from Selinsgrove to Milton to Berwick is considered to be a single interdependent area of commercial, industrial, and social activity which is in the aggregate larger than the Williamsport-Lock Haven economic activity area.

ECONOMIC ACTIVITY AREAS

CENTRAL SUSQUEHANNA VALLEY (MILTON-SELINSGROVE-BERWICK) is an economic activity area which contains an estimated 130,000 people - 24 percent of the District's population. Slightly over half of the total lives in the central cities of Milton, Lewisburg, Sunbury, Northumberland, Selinsgrove, Danville, Bloomsburg, and Berwick. Another quarter lives in the urban areas adjacent to these communities, and the rest lives in the rural hinterland.

U.S. 11 and 15 join at Shamokin Dam just below the confluence of the North and West Branches of the Susquehanna River and have long since replaced the canals and railroads as this economic area's main traffic arteries. The completion of I-80 from the New Jersey state line to White Deer on the Susquehanna River has introduced a major new route into this activity area. When completed across the State it will give the District's centers quick access to New York and Cleveland markets as well as connections to other high-speed routes which serve the Atlantic Coast Megalopolis.

This activity area is unique in the State because it includes four county seats as well as parts of five counties - Snyder, Union, Northumberland, Montour, and Columbia. It is an area of small manufacturing plants. There are five plants with about 1,000 or more employees, but for the most part the 249 manufacturers in the economic activity area have one to three hundred employees and produce a wide range of products - from textiles and apparel to furniture and aircraft parts.

The 26,550 manufacturing jobs recorded in 1966 in this economic activity area comprised three-quarters of the total for these five counties. The total has probably been exceeded in the past because this economic activity area suffered several serious setbacks during the fifties and early sixties. Sunbury lost an electrical manufacturer and two textile plants in the fifties while the Berwick branch of American Car & Foundary closed in the early sixties. These old plants are now reoccupied by new industries which have replaced and in some cases exceeded employment of their predecessors.

Four-fifths of current manufacturing employment is in five industries - textiles, transportation equipment, food processing, apparel, and furniture. A third of factory jobs are held by women. However, four of these five leading sources of employment are in industries expected to grow slower than the national average or decline in employment during the 1965-75 period. Only transportation equipment (with current local employment of about 3,800) is an industry in which faster than average growth of employment is predicted.

Another source of employment almost equal to transportation equipment in the economic area is institutional employment at Bucknell University, Susquehanna University, Bloomsburg State College, the Federal Penitentiary at Lewisburg, the Selinsgrove school and hospital for the mentally retarded, and the Danville mental hospital which together employ 3,600 people. They employ persons with a wide range of skills ranging from doctors and orderlies to professors and janitors, and bring money to the local economy from outside in much the same manner as manufacturing plants. For that reason, they probably deserve to be considered as similar to the area's factories.

In recent months, economic conditions in the area's several centers have been quite favorable. In Berwick, where American Car & Foundary vacated a 150-acre site including 2 million square feet of space under roof, twelve plants are now located. And between Berwick and Bloomsburg, an 85-acre site has been acquired for further industrial expansion by development organizations of the two communities with the aid of the electric utility serving the area. Near Danville, this utility began a $100 million steam generating plant and a manufacturer of aircraft engine parts is expanding its operations at Danville. At Milton, a food processor increased employment by 300 from 1963 to 1966; a textile producer grew with 100 new jobs and a television manufacturer grew with 600 new jobs. A 700-acre industrial tract has been acquired near Milton with the help of the same utility, and planning for improvements is in process. At Northumberland, the 300-acre railroad marshalling yards also are available for industrial use.

At Sunbury, the fabric dam being constructed across the Susquehanna by the Pennsylvania Department of Forests and Waters is to be completed before the end of 1968 and will stimulate tourism in the area by early 1969. North of Sunbury a large shopping center is under construction at a location designed to attract buyers from the three corners of the economic activity area.

In Lewisburg and Selinsgrove, university growth remains important among economic activities. Particularly promising is the computer center planned at Bucknell University which will be available for business and governmental use as well as for educational projects.

WILLIAMSPORT-LOCK HAVEN is the economic activity area with the second largest population in the Central Susquehanna Basin District. Its 118,500 people comprise a fifth of the District's population and 77 percent of the people in Clinton and Lycoming Counties. Most of these people live in the valley between the Allegheny Escarpment and Bald Eagle Ridge in Williamsport, Lock Haven, Jersey Shore, South Williamsport, Montoursville, Muncy and other smaller communities adjacent to the West Branch of the Susquehanna River.

More than any other section of the District, this economic activity area owes its existence to the forests and the river. Williamsport and Lock

Haven in particular were the destination of logs floated down the West Branch and its tributaries even after local forests were exhausted. Large sawmills lined the river banks and in Williamsport a great boom across the river caught logs pushed into the river far upstream. A flood in 1889 wiped out the local lumber industry although there are traces today of the earlier influence of the forests seen in the presence of paper mills and furniture manufacturing.

While it was the logging era that caused the greatest population increases - the population almost trebled in Lycoming and Clinton Counties between 1850 and 1890 - it was the earlier canal era that dictated locations. Along the Susquehanna, as in the Central Susquehanna Valley economic activity area, communities were built to utilize the canal as well as the most convenient source of energy - water power.

Today, there is an almost continuous urban stretch for forty miles from Muncy on the east to Lock Haven on the west where slightly over half the area's total population lives in central cities. Adjacent to them along the Susquehanna River flood plain on both sides is an urban fringe containing an additional quarter of the population, while the remaining quarter lives in the rural hinterland.

The economic base of the area has for many years been diversified manufacturing. The 1960 Census reported that 45 percent of the job holders in Clinton County and 43 percent of them in Lycoming County were employed in manufacturing; the proportion for the State was 36 percent. Of the 27,600 factory jobs, 21,600 were concentrated in the six major communities that traditionally have been the centers of economic activity. Williamsport with 11,663 jobs led the rest while Lock Haven with 3,813 jobs was second in importance.

Transportation equipment with more than 5,400 jobs is the area's leading source of employment while others in order of importance are fabricated metal, apparel, paper, textiles, and electrical machinery. Of these six industries, only apparel and textiles are expected to grow slower than the national average for all industries. The other four have better than average growth prospects, so assuming the area gets its share of new jobs in these industries, employment growth should come naturally.

The area's share of factory jobs held by women is 24 percent, substantially lower than the proportion held by women in the Central Susquehanna Valley area and lower than the 29 percent existing Statewide.

Recent developments include expansion and modernization of Lock Haven's two largest employers, a light aircraft manufacturer and a paper mill, each of which has over a thousand employees. At Williamsport, new plants include an aluminum extrusion factory, a screw machine producer, a shoe plant, an apparel mill, a plastic film producer, and a kitchen range manufacturer. These and existing plants being expanded are adding an estimated 1,200 new jobs in less than two years.

The area now is served by several branches of the Penn Central Railroad, the Reading Railroad, air carrier service at the Williamsport Municipal Airport and highways U.S. 220 and U.S. 15. The area will be linked to the Keystone Shortway (I-80) and to New York State by Appalachian Development Highways.

STATE COLLEGE-BELLEFONTE is an economic activity area with a population of 56,600. Most of its growth has occurred in recent years with the growth of The Pennsylvania State University.

The area's settlement dates back to the 18th Century when iron ore was discovered around Bellefonte, causing it to become an important iron producing center during the late 18th and early 19th Centuries. Affluence and its central location gave it unusual political influence during the 19th Century, resulting in the election of five different governors from Centre County.

With technological changes in the manufacture of steel, Bellefonte's iron industry declined sharply. Today, copper rolling and drawing, metal working, and limestone processing are the major industries in this county seat of 6,000 people.

Bellefonte today is about the size State College was in 1940. Now State College is one of the fastest growing communities in Pennsylvania. Its 1960 population of 22,400 had grown to an estimated 30,000 by 1966 as the student body of The Pennsylvania State University increased from 16,100 to 22,500. The suburban townships also have experienced significant population growth.

As a State-related institution, the University's employment is included in the "government" category, making this the leading source of work for the economic activity area. In 1966, total governmental employment in all of Centre County was 13,600, 43 percent of the jobs in this labor market area. The number of jobs continues to rise as is indicated by the fact that in 1968 there were an estimated 14,400 people employed by the University.

The University's large faculty has attracted research grants from both public and private sources and has encouraged small research-related firms to locate near the University in much the same manner as similar firms have been attracted to Pittsburgh and Philadelphia. By 1966, for example, the County's second largest manufacturing industry group was engineering, laboratory, and scientific instruments, employing 1,243.

This was exceeded only by the 1,338 employment in rolling and drawing copper in Bellefonte. Electrical machinery with 900 jobs, lime production with 450 jobs, and food processing with 280 jobs were next in order of importance in the manufacturing sector.

Hidden in employment statistics are the research and development jobs located near the University. The largest of these firms has about a thousand employees and specializes in work dealing with information systems and other non-production activities. Other firms specialize in ceramics, chemicals, etching machines, organic chemicals, spectrometers, and other such sophisticated equipment. Although they are not technically manufacturing enterprises, they function in the economy in a similar fashion by attracting capital from outside, and generally the jobs in these research and development firms are high-wage paying because of the technical competence they require.

In the past, there has been some complaint that even though State College is in the center of the State, it is difficult to reach. There is no railroad passenger service to State College; the nearest air carrier service is twenty miles away, and highways have been tortuous during Winter months. While there is no prospect for rail passenger service, airline service is growing at Mid-State Airport where passenger travel had grown to 16,000 by 1966, nearly doubling since 1962. Substantial highway improvements are in progress and planned: U.S. 22-322 from Harrisburg to Lewistown is being improved to limited access standards while U.S. 220 will be reconstructed as the "Appalachian Thruway." Both are Appalachian Development Highways. The Keystone Shortway (I-80) will also serve the area, and U.S. 322 is being improved from Lewistown to State College.

SHAMOKIN-MOUNT CARMEL is the part of the Shamokin-Shenandoah economic activity area located in southeast Northumberland and southern Columbia Counties with an estimated 51,000 people. The other part of this area is located in the Northeast Local Development District and was described in the chapter about that District. The area's growth came in the 19th and early 20th Centuries as anthracite mining flourished. Geologically it is part of the Western Middle Field, the same field which supported mines directly to the east around Ashland, Frackville, Shenandoah, and Mahanoy City.

All of these communities flourished from 1860 until the mid 1920's. Shamokin alone had a population in 1920 of about 21,200 and neighboring Mount Carmel had about 17,500 inhabitants. By 1960, Shamokin was down to 13,674 and Mount Carmel's population was 10,760 as mining jobs disappeared. During the same period, mining employment dropped from 13,200 to 2,500.

This area has a highly urban population living in and around Mount Carmel, Shamokin, Coal Township (which surrounds Shamokin), and Centralia. Of the 51,000 population living in this area in 1960, 85 percent lived in the central cities and adjacent urban fringe, leaving only 15 percent on farms on the surrounding rugged mountainsides.

In decided contrast to the State College-Bellefonte economic activity area which has about the same population, the Shamokin-Mount Carmel area has several economic handicaps: its industries are largely female employing; its transportation system has not kept pace with modern developments; its population is growing older as a result of large-scale out-migration; and much of its male labor force commutes to other communities to work.

Two-thirds of the 6,300 manufacturing jobs in the Shamokin-Mount Carmel area are in 76 apparel factories. Leather and food account for another 1,000 jobs and are next in order of importance. With such an industrial composition, it is no surprise that 83 percent of the area's manufacturing jobs are held by women.

Men commute daily 30 to 60 miles to jobs at Milton, Harrisburg, Lebanon, and Williamsport. This fact is so well institutionalized that daily buses are run from a television factory in Watsontown to Shamokin to accommodate workers making that 70 mile round trip.

Despite the willingness to commute (it is estimated locally that three quarters of the men work outside the Shamokin-Mount Carmel area) much of the population has left the area - particularly young people. By 1960, the median age for the State was 32.0 years; for Shamokin it was 39.1 years.

The population of Northumberland County appears to be growing slightly after several years of decline. It is not clear whether this is due to a stop in the out-migration from the Shamokin-Mount Carmel area or greater increases in the Sunbury and Milton areas.

Recent developments include the creation of industrial parks at Shamokin and Mount Carmel which have attracted several firms. Now a new industrial park of 200 acres is being built near Shamokin, and a mine area restoration and land fill project to provide industrial land near Mount Carmel is in progress.

LEWISTOWN is an economic activity area with an estimated population of 34,800, slightly over a third of which is in the Borough of Lewistown itself. Adjacent urban areas along the Juniata River and Kishacoquillas Creek contain another 13,000 people, while about 9,000 people live on hinterland farms in the fertile valleys along these same streams.

As with many other communities settled along the banks of rivers, that location today is largely irrelevant to its economy. Lewistown prospered during the 19th Century as a station on the Main Line canal between Harrisburg and Pittsburgh and also as a small center for iron production, but with the rise of railroads and the exhaustion of local iron ores, its early economic base declined.

Two industries sustained the community during the twenties and thirties - a manufacturer of synthetics and a producer of railroad car wheels and axles. Apparel, with about a tenth of all jobs, was also a steady source of work. Since 1950, non-electrical machinery, electrical machinery, and transportation equipment have increased in importance, growing from practically no employment to a fifth of all manufacturing jobs.

By contrast with the Shamokin-Mount Carmel area where more than four-fifths of all manufacturing jobs are held by women, in the Lewistown area less than a quarter are. The two largest industries contain about 4,200 of the area's 6,300 manufacturing jobs and the prevailing wage rates in them are medium to high, thereby assuring good incomes to much of the manufacturing work force.

Jobs have not expanded fast enough to absorb the natural increase of population, but in recent years this fact has resulted less in large-scale unemployment than in out-migration. Even during the 1960-66 period when Mifflin County's population grew an estimated 3.7 percent, there was still a loss of about 1,200 people. The unemployment rate, however, was only 3.3 percent of the work force.

While Lewistown has not suffered losses of mining employment as is true of so many other economic activity areas in Appalachia, neither has it experienced booming economic conditions. It does, however, enjoy good transportation connections by the main line of the Penn Central Railroad and by U.S. 22, corridor "M" on the Appalachian Development Highway System. To the extent that transportation advantages will support future economic development, the Lewistown economic activity area will be impressively endowed in the near future.

RENOVO is an economic activity area with 4,100 people in Renovo Borough, approximately 300 people in adjacent townships, and an additional 1,400 in the forested hinterland nearby. Renovo itself was built by the Pennsylvania Railroad adjacent to the West Branch of the Susquehanna River where large railroad repair shops became the economic basis of the community. Employment at these shops, while not entirely phased out, has dropped from about 750 in 1950 to 375 in 1960 and to less than 100 by 1968.

Renovo is located deep in the Appalachian Highlands and is largely surrounded by the Sproul State Forest. Lumbering is not, however, a major source of employment to the area. In 1966 it accounted for only 15 jobs in the economic activity area.

Renovo is in the process of substituting other kinds of employment for jobs in railroading, but the effort is complicated by its remote location. Recently, however, it has attracted a branch of a Lock Haven firm making small planes which may be viewed as substituting a modern kind of transportation equipment production for an older one. With this plant will come construction of a 3,000 foot airstrip that undoubtedly will improve access to the area.

Highways, however, are noticeably low quality since Renovo's main connection to other areas is via Pa. 120, a two-lane, winding route from Lock Haven to Emporium and points west. Recent improvements have been made, but in comparison to other economic activity centers within a twenty minute drive of Interstate highways, Renovo suffers a transportation disadvantage.

PHILIPSBURG, an economic activity area with about 5,700 people, is about the same size as Renovo but has a distinctly different economic base. Its largest single employer is a cigar manufacturer employing over 600 people, but it also contains Centre County's two largest apparel plants with a combined employment of 360. Another important employer is the Philipsburg General Hospital (operated by the Commonwealth) which has 260 jobs.

Philipsburg itself had 3,800 population in 1960, its urban fringe had approximately 450 people, and its surrounding hinterland of small mining communities had about 1,450 people. Some of these people live in Clearfield County, which is a part of the North Central Local Development District.

Bituminous coal mining played an important role in the growth of Philipsburg. It shares with neighboring Clearfield County generous measures of the Brookville and Lower Kittanning seams, and had recoverable reserves of

912 million tons in 1960. Of 17 mining companies working in Centre County, over half the activity is concentrated around Philipsburg, but since Philipsburg is on the Clearfield-Centre County line, companies based in both counties work back and forth throughout the area.

Coal production from Centre County, like many other areas of Appalachia, has fluctuated dramatically during the past two decades. The County's production was 974,000 tons in 1950, 1,416,000 in 1956, 586,000 in 1965, and 789,000 tons in 1966, illustrating the erratic nature of this industry. The only constant element during this period has been the steady decline in mining employment - a drop from 468 in 1956 to 211 in 1966 - illustrating that neither Philipsburg nor neighboring communities can depend on the rapidly mechanizing mining industry to provide many jobs for local residents.

Philipsburg's location, like Renovo's, is something of a handicap since its primary access route in the past has been via U.S. 322, a winding, two-lane highway. However, an interchange with I-80, the Keystone Shortway, will be located eight miles to the north and will change Philipsburg's transportation connections dramatically. In addition, this economic activity area benefits from the presence of Mid-State Airport, 10 miles away at Black Moshannon State Park, which provides the area with scheduled airline service.

HARRISBURG is an economic activity center located outside the Appalachian Region with only a small part of its area, including sections of Perry and Juniata Counties along the Susquehanna and Juniata Rivers and U.S. 22-322, in the Central Susquehanna Basin District. This urban fringe area contains about 5,000 people but does not contain significant employment sources.

DISTRICT CONDITIONS

PEOPLE

The eight economic activity centers described above contain slightly over half of the District's 557,500 population. This is a larger proportion than the 44 percent of the population that the Bureau of the Census defined as urban in 1960, but not inconsistent with it. Slightly different statistical concepts have produced the differences in totals, but the result shows that much of the Central Susquehanna Basin District's population is still rural. Over 55 percent of the people lived in places of less than 2,500 population in 1960.

The largest urban concentrations are found in Northumberland County (62 percent) and Lycoming County (60 percent). Centre, Clinton, Montour, and Columbia had about 40 percent of their population classified as urban in 1960, while the remaining five counties of the District had proportions ranging down from Mifflin's one third to none in Juniata.

Three of the eleven counties - Lycoming, Northumberland, and Centre - contained 54 percent of the District's total population in 1960 - only one percent less than their proportion in 1950. Estimates for 1965 indicate that they maintained this share although the relative proportion of Centre County's population is growing while that of Northumberland County is declining.

During the fifties, the District grew by about 18,000 people, but this was not nearly enough growth to equal the natural increase of the population for this period. Accordingly, about 41,200 persons migrated from the District in the fifties, and of this number slightly more than a fifth of the total was in the 20-29 age group.

This is a markedly smaller proportion of young people than has been typical in other local development districts where a third or more of the out-migrants have been 20-29 years old. The explanation for this lower proportion lies in the presence of The Pennsylvania State University in Centre County which caused that county to show an increase of 5,900 in the 20-29 age group (and a loss of 6,700 in the 30-39 age group).

When the statistical aberration of this student population is eliminated, however, the District's actual loss of young people is found to be much more serious - 38 percent of those leaving were in the 20 to 29 age group. By far the largest loser was Northumberland County, from which 6,800 of the 21,900 who left were in this young group. Mifflin County lost a higher proportion as 2,000 of the 4,970 who left were young adults.

Fortunately, the rate of out-migration from the District dropped in the early sixties despite the fact that in several other local development districts it accelerated. In the Central Susquehanna Basin District, Centre, Snyder, and Union Counties all continued to show in-migration as they had during the fifties, and Juniata County had a small amount of in-migration. Total out-migration for the 1960-65 period was 6,687. Thus, the rate of out-migration dropped from about 4,100 annually to 1,337.

By 1975, the District's overall losses are expected to be replaced by overall in-migration because of the great gains in Centre County. The major factor there is the continued growth not only of The Pennsylvania State University but also of the research and development firms that spin off from the university setting.

Aside from that unusual phenomenon in Centre County, the remainder of the District is also expected to continue to hold a larger proportion of the natural increase of its population. Lycoming County is expected to have the largest out-migration, but this will occur when the County's population is growing by about six thousand. Clinton and Columbia Counties are expected to have minimal losses while any continued losses that Northumberland and Montou Counties might have will be more than offset by continued in-migration to Snyder and Union Counties.

TABLE 60

OUT-MIGRATION FROM COUNTIES IN THE CENTRAL SUSQUEHANNA BASIN DISTRICT

County	1950-1960	1960-1965	1965-1975
Centre	+ 1,962	+ 2,315	+ 19,800
Clinton	- 3,570	- 1,820	- 200
Columbia	- 4,879	- 918	- 600
Juniata	- 1,322	+ 150	- 300
Mifflin	- 4,966	- 1,244	
Lycoming	- 4,803	- 4,543	- 2,300
Montour	- 890	- 372	+ 800
Northumberland	-21,869	- 3,205	
Snyder	+ 401	+ 1,798	
Union	+ 194	+ 2,066	
Perry	- 1,439	- 914	- 300
District Total	-41,181	- 6,687	+ 16,900

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates and projections.

These projections of migration, like those discussed for other local development districts, are derived from employment projections. Since those projections were developed for labor market areas, population totals were of necessity derived for these labor market areas also. Thus, estimates for 1975 for Juniata and Mifflin Counties were combined as were those for Montour, Northumberland, Snyder, and Union because these two groups make up two labor market areas.

During the 1960-65 period when Pennsylvania's population was growing by only 2.3 percent, the Central Susquehanna Basin District was growing by 3.5 percent. The projected 8.5 percent increase in the District's population during the 1965-75 period represents an even more spectacular growth rate. However, most of this expected growth will come in Centre County where 28,000 of the 51,600 District increase probably will occur.

TABLE 61

CENTRAL SUSQUEHANNA BASIN DISTRICT POPULATION SUMMARY

County	1960	1965	1975
Centre	78,580	87,000	115,000
Clinton	37,619	37,600	39,800
Columbia	53,489	54,200	55,800
Juniata	15,874	16,900	66,500
Mifflin	44,384	45,500	
Lycoming	109,369	110,800	116,500
Montour	16,730	17,100	187,000
Northumberland	104,138	103,500	
Snyder	25,922	29,100	
Union	25,646	28,800	
Perry	26,582	27,000	28,500
District Total	538,333	557,500	609,100

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates and projections.

The remaining 23,600 will be distributed rather evenly throughout the District's other labor market areas. None of these other areas, however, is expected to approach the 32 percent growth expected in Centre County over the 1965-75 decade. Instead, increases of 3 to 6.5 percent are expected in the District's six other labor market areas - increases which will be steady if not spectacular.

EMPLOYMENT

In Centre County the word "spectacular" certainly applies to both population and employment growth. It is perhaps remarkable that the County population grew only 10.7 percent during the 1960-65 period when employment was growing 29.5 percent. Expressed in absolute terms, it is amazing that the population increase was only 8,420 when 7,000 new jobs were created.

The explanation is not that the unemployed were simply put back to work; there were only 1,100 unemployed in the State College-Bellefonte labor market area in 1960. Rather many of the people holding these new jobs are either single or commuters from outside the County. Some may be wives not previously in the labor force.

Whatever the explanation for the 1960-65 period, continued expansion of jobs must result in considerable migration into the County, and there are no present indications of abatement in employment growth. Nevertheless, the 1965-75 projection for employment growth in Centre County is somewhat conservative - it is 3.1 percent annually, half the rate for the 1960-65 period.

Elsewhere in the District the projected rates of growth for the same period range downward from 2 percent annually in Columbia County to 0.5 percent in the four-county Northumberland, Montour, Snyder, and Union area.

TABLE 62

CENTRAL SUSQUEHANNA BASIN LOCAL DEVELOPMENT DISTRICT EMPLOYMENT
(IN THOUSANDS)

Industry Group	1960	1965	1975
Agriculture	11.5	10.5	8.4
Mining	2.8	1.5	0.6
Contract Construction	5.1	6.7	9.2
Transportation, Communications, Public Utilities	8.5	8.3	9.5
Trade	22.5	24.2	28.9
Finance, Insurance, Real Estate	3.1	3.3	4.0
Services	16.7	19.3	24.8
Civilian Government	22.3	29.1	39.8
Manufacturing	67.7	74.7	83.0
Food Products	6.0	6.9	7.0
Tobacco	1.0	1.0	1.0
Textiles	8.0	9.2	8.6
Apparel	12.2	13.0	12.9
Paper	2.6	2.9	3.2
Printing and Publishing	1.4	1.8	2.0
Chemicals	4.2	3.2	3.8
Petroleum	*	0.1	0.1
Rubber and Plastics	0.1	0.3	0.5
Leather	2.0	2.0	1.9
Lumber, Wood, Furniture	5.5	6.8	7.0
Stone, Clay, Glass	2.0	1.6	2.1
Primary Metals	4.0	4.7	5.3
Fabricated Metals	3.6	3.8	4.7
Non-electrical Machinery	2.3	2.6	3.7
Electrical Machinery	3.0	4.4	6.1
Transportation Equipment	8.0	7.8	10.0
Instruments	0.6	1.7	2.2
Miscellaneous Manufacturing	1.2	0.9	0.9
Sub-Total Agricultural and Wage and Salary	160.2	177.6	208.2
Self-employed	21.4	20.4	16.8
Total	181.6	198.0	225.0
Unemployed	15.5	8.5	7.5**

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*Fewer than 50 employees.

**3.5% unemployment rate assumed as point at which out-migration begins.

Source: Pennsylvania Department of Labor and Industry, Bureau of Employment Security; Pennsylvania Department of Internal Affairs; Pennsylvania State Planning Board.

The entire Central Susquehanna Basin District is projected to grow only 1.36 percent annually, which is considerably less than the 2.16 percent annual gain during the 1960-65 period.

Actually, however, the District growth rate is not expected to drop as drastically as this difference in growth rates suggests. Over the 1960-75 period, the U. S. Department of Labor is reducing its estimate of "self-employed, unpaid family and domestic workers" with the result that employment reported in this sector is decreasing simply because of a change in statistical methods. Excluding this sector, the total of all agricultural and wage and salary employment in the Central Susquehanna District is expected to grow at a rate of 1.72 percent annually during the 1965-75 decade.

A look at the recent past discloses the trends from which this future growth is expected to come. In comparison with the rest of Pennsylvania, the Central Susquehanna Basin District did quite well between 1960 and 1965. Had the District grown only as well as the State, its employment increases would have been but 11,550 jobs instead of the 17,400 that actually occurred. Consequently, the District experienced an upward shift in relation to the rest of the State - a shift of 5,850 jobs.

Two factors explain this change: the ability of the District to compete effectively with other areas of the State for new jobs and the mix of rapid growth, slow growth, and declining industries present in the District.

All of the upward shift of the District (and more) can be attributed to the competitive ability of the District. That factor alone accounted for 7,000 new jobs during the 1960-65 period.

This ability to compete for new employment was partially offset by the District's concentration of jobs in slow growth or declining industries which caused a relative downward shift of 1,150 jobs. This negative mix effect means simply that jobs were not gained because there was more District employment in industries growing slower than the State average than there was in industries growing above the average.

The District's ability to compete was demonstrated in several industries in which it gained substantial new shares of State employment. Among these were:

Industry	Employment Change Attributed to Favorable Competitive Effect
Government	+ 3,010
Textile Products	+ 1,780
Electrical Machinery	+ 1,370
Construction	+ 1,130
Food Products	+ 1,020

Despite the good performance in these leading industries and the District's overall favorable competitive ability during the 1960-65 period, it did lose out to the rest of the State in competition for new jobs in a few industries. These included:

Industry	Employment Change Attributed to Unfavorable Competitive Effect
Transportation Equipment	- 1,450
Trade	- 1,400
Chemical Products	- 960

In a sense the Central Susquehanna Basin District represents the Appalachian ideal - a district which overcomes the handicap of having heavy concentrations of employment in industries of below average growth by capturing more than its equal share of new employment. If it had simply grown at Statewide rates in the industries present in 1960, it would have lost substantial shares of employment in the following industries:

Industry	Employment Change Attributed to Unfavorable Industrial Mix
Agriculture	- 2,110
Textiles	- 1,160
Transportation, Communications, Public Utilities	- 1,060
Mining	- 890
Food Products	- 550

In some industries, the District's expected losses from the presence of the below-average growth industries were offset by defying the statistical expectation. In textiles, for example, the growth experience was negative for the State between 1960 and 1965. Hence, the Central Susquehanna Basin District (and all others with textile employment) could be expected to lose their proportionate share of the State loss. But instead the District increased its employment in the face of the State's declining trend. The same was true in the food products industry.

The District's losses deriving from concentration in slow growth and declining industries were offset largely by exceptional growth in other industries. The sums of gains and losses from the industrial mix and the competitive effect equal the "Net Relative Change." Those industries showing the largest increases in the District were:

Industry	1960-65 Upward Shifts of Employment
Government	+ 5,190
Services	+ 1,400
Construction	+ 1,230
Electrical Machinery	+ 1,180
Instruments	+ 1,060

Four of these five industries were above-average growth industries in the State during the 1960-65 period which indicates that the District is showing considerable ability to obtain shares in the industries most likely to continue growing of their own accord in the future. The District did not, however, increase its share of employment in all the rapid growth industries in which it has large concentrations of employment. It fell behind in trade, apparel, and transportation equipment.

Turning from the actual past to the projected future, the District's 17.2 percent employment growth for 1965-75 is expected to continue to be slightly higher than the State's growth - 15.8 percent. However, the District will be in the future more than ever in competition with other sections of the Nation for new employment.

TABLE 63

CENTRAL SUSQUEHANNA BASIN DISTRICT INDUSTRIES EMPLOYING 4,000 OR MORE IN 1965

Industry Group	1965 Employment	State Growth Characteristic 1960-1965	District Growth Relative to the State
Government	29,100	rapid growth	above average
Trade	24,200	rapid growth	below average
Services	19,300	rapid growth	above average
Apparel	13,000	rapid growth	below average
Agriculture	10,500	declining	above average
Textiles	9,200	declining	above average
Transportation, Communications, Public Utilities	8,300	declining	above average
Transportation Equipment	7,800	rapid growth	below average
Food Products	6,900	declining	above average
Lumber, Wood, Furniture	6,800	rapid growth	above average
Construction	6,700	rapid growth	above average
Primary Metals	4,700	slow growth	above average
Electrical Machinery	4,400	slow growth	above average

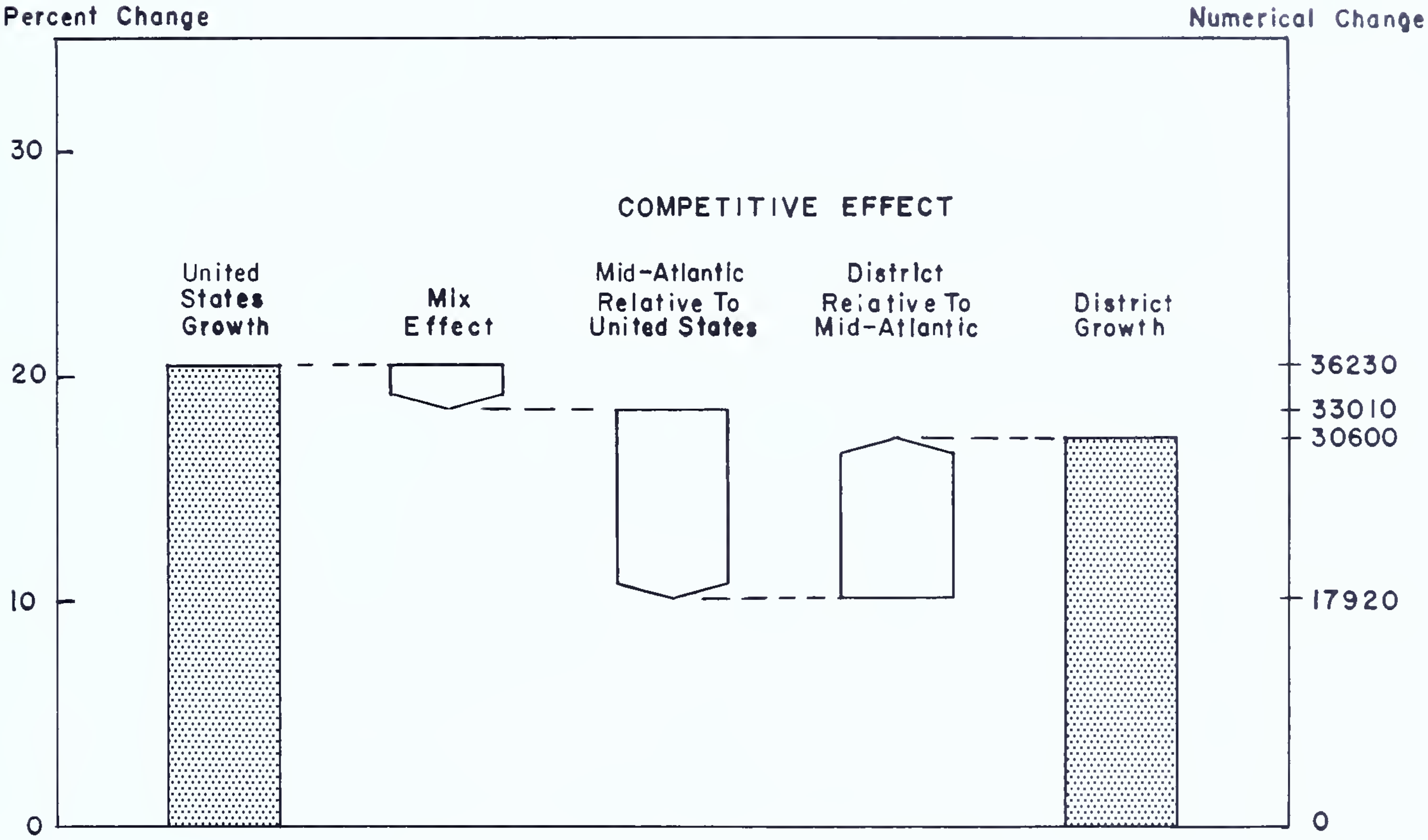
Source: Pennsylvania State Planning Board.

Thus, it is helpful to see how the growth in the Central Susquehanna Basin District will compare with national trends over the projected 1965-75 period. Despite the fact that it is expected to be one of the leading growth areas in Appalachia Pennsylvania during this period, it may not grow at national rates. If it equalled national growth expectations, the District's 1965 employment would increase by 36,230, but the projected growth is only 30,600 new jobs.

Relative to the Nation, therefore, the District would experience a downward shift of 5,630 jobs.

CHART 16

COMPONENTS OF EMPLOYMENT CHANGE CENTRAL SUSQUEHANNA DISTRICT 1965 TO 1975



Source: Pennsylvania State Planning Board

In comparing the District with the Nation, not only does the District have a heavy concentration of industries growing at below average rates, it may not compete successfully with other sections of the Nation for new jobs. Of the 5,630 relative loss, 57 percent may result from employment being concentrated in slow-growth and declining industries.

The largest contributors to the District's unfavorable industrial mix are:

Industry	Employment Change Attributed to Unfavorable Industrial Mix
Agriculture	- 5,610
Textile Products	- 2,260
Trade	- 1,480
Food Products	- 1,430
Apparel	- 1,410
Lumber, Wood, Furniture	- 1,180
Transportation, Communications, Public Utilities	- 1,080

The remainder of the downward shift may be the result of the District's inability to obtain shares of new employment as fast as other sections of the Nation. Forty-three percent of the net relative downward change may result from poor competitive ability. That is, there may be a general tendency for industries in the District to grow more slowly (or decline more rapidly) than the same industries located in other sections of the Nation.

On closer examination, this poor competitive effect may be due less to the District's own deficiencies than to the fact that it is part of the Middle Atlantic States economic region which may perform poorly in comparison with other sections of the Nation. If the District were to compare as poorly as the Middle Atlantic States, it would experience a downward shift of 15,090 jobs instead of the 2,410 projected.

District leaders can take heart, therefore, that even though employment growth may not keep pace with the national average, within the Middle Atlantic States - the area of primary competition for the Central Susquehanna Basin District - the District is expected to perform quite well.

Concentrating on the anticipated performance of the District in relation to the Middle Atlantic States, the Central Susquehanna Basin District appears to have significant competitive advantages in several major industries. Among them are:

Industry	Employment Change Attributed to Favorable Competitive Effect
Trade	+ 3,680
Agriculture	+ 1,890
Apparel	+ 1,300
Construction	+ 1,250
Transportation, Communications, Public Utilities	+ 1,010
Non-electrical Machinery	+ 910
Transportation Equipment	+ 860
Primary Metals	+ 770

Many of these are leading sources of employment in the District so that the expected superior performance during the 1965-75 period will result in substantial shifts to the District. However, the District's largest industry, civilian government, is not expected to grow at either national or Middle Atlantic States rates. This below average performance expectation for civilian government also is true for Appalachia Pennsylvania and for other local development districts.

In only two of the six rapid growth industries that are major employers is the District expected to exceed national averages. In addition to government, the other rapid growth industries that are expected to lag

TABLE 64

CENTRAL SUSQUEHANNA BASIN DISTRICT INDUSTRIES EMPLOYING 4,500 OR MORE IN 1975

Industry Group	1975 Employment	National Growth Characteristics (1965-1975)	District Performance Expectation 1965-75 relative to: Mid-Atlantic	United States
Government	39,800	rapid growth	below average	below average
Trade	28,900	slow growth	above average	above average
Services	24,800	rapid growth	above average	below average
Apparel	12,900	slow growth	above average	below average
Transportation Equipment	10,000	rapid growth	above average	above average
Transportation, Communications, Public Utilities	9,500	slow growth	above average	above average
Construction	9,200	rapid growth	above average	above average
Textiles	8,600	declining	above average	below average
Agriculture	8,400	declining	above average	above average
Food Products	7,000	declining	above average	above average
Lumber, Wood, Furniture	7,000	slow growth	above average	below average
Electrical Machinery	6,100	rapid growth	above average	below average
Primary Metals	5,300	slow growth	above average	above average
Fabricated Metals	4,700	rapid growth	above average	below average

Source: Pennsylvania State Planning Board.

behind the national norm are services, electrical machinery, and fabricated metals. Only in transportation equipment and construction does the District have rapid growth industries with District employment expectations exceeding national growth rates.

Most of the District's downward shift in relation to the national economy may be concentrated in declining and slow growth industries, which again highlights the influence of a concentration of employment in such industries. The largest industries contributing to this net relative change downward are:

Industry	Expected Net Relative Change
Agriculture	- 4,240
Apparel	- 2,750
Textiles	- 2,480
Food Products	- 1,310
Mining	- 1,210
Lumber, Wood, Furniture	- 1,190

By 1975, the balance between rapid growth industries on the one hand and slow growth and declining industries on the other is expected to shift slightly in favor of the above average growth sector. And this change of mix may be enough to enable the Central Susquehanna Basin District to achieve the national growth rate after 1975. By that time, of course, there is the possibility that today's rapid growth industries will have fallen into the slow growth category, but with the presence of The Pennsylvania State University and the budding research and development industry in Centre County, there is an equally good possibility that the District will obtain a large share of new industries with considerable growth potential.

TABLE 65

DISTRIBUTION OF EMPLOYMENT BY INDUSTRIAL GROWTH CATEGORY

Industrial Growth Category	Percent Distribution of District Employment 1965	1975
Rapid Growth	48	54
Slow Growth	34	33
Declining	18	13

Source: Pennsylvania State Planning Board.

If such new industries should develop or if the District is successful in obtaining jobs in those slow growth and declining industries where relative changes will be greatest - agriculture, apparel, textiles, food products, mining, lumber-wood-furniture - the District may perform better than these employment projections predict. In any event, District leaders may wish to concentrate on gaining shares of rapid growth industries to reduce the drag of today's mixture of below average growth industries at the same time that it continues to capitalize on obtaining additional shares of employment in its large industries - government, trade, and services.

Already District leaders through the Susquehanna Economic Development Association have decided that their industrial development activities must be selective to be effective in the long-run.

DISTRICT PROBLEMS

The Susquehanna Economic Development Association (SEDA) acts as the organization for the Central Susquehanna Basin Local Development District and has prepared a draft development plan for the District. In it the basic objective of its development work is "to raise per capita income in the region from the second quartile to the top quartile nationally during the coming decade."

SEDA has identified several obstacles to achievement of this objective including insufficient community organization, insufficient development capital, uneconomical governmental service areas, under-development of forest resources and marketing procedures, under-size farm units, absence of management consulting services for existing businesses, insufficient highways and industrial districts, and under-utilization of the Susquehanna River Basin.

These are both organizational and physical problems upon which the SEDA leaders are concentrating. While they wish to have funds from the Federal and State governments to help them achieve solutions, there is also realization that it is the District's own resources that will provide the most help.

MANPOWER

The District's key resource is, of course, its manpower. A decade ago, a ninth of its work force was unemployed. In many of the District's labor markets, the proportion was greater: the Berwick-Bloomsburg area was hardest hit with 13.5 percent of its work force unemployed in 1958; Lewistown with 12.8 percent was next, followed by Sunbury-Shamokin (11.6 percent) and Lock Haven (11.3 percent). Only Williamsport (10.2 percent) and State College-Bellefonte (5.9 percent) fell below the average.

Unemployment lessened in the early sixties but was still considered severe as 8.1 percent of the work force was jobless in 1962. By 1965, this rate had been cut in half. Yet the experience of these high unemployment rates had emphasized the importance of having people with skills for new industries. Farmers, miners, railroaders, and others in the District whose jobs had disappeared showed a willingness to work by commuting far outside the District for jobs, but others were unemployable without retraining.

Accordingly, manpower training programs were instituted in the District for a variety of job openings ranging from machine operators and medical laboratory assistants to appliance repair and maintenance repair. Since 1962, the manpower development training program has graduated 735 individuals in this range of skills and has sponsored 2,100 others in on-the-job training programs in various industries in the District.

But to meet the longer term manpower requirements, District leaders have recognized that technical and vocational training should be available before workers entered the labor force. In this way people would be shielded better from loss of jobs because they had obsolete skills. At the same time communities could benefit by being able to supply skilled people to prospective industries. Thus, State supported but locally directed area vocational-technical schools have been established to serve students in all the District's counties except Clinton and Lycoming.

In Lycoming County, Williamsport Community College (formerly Williamsport Technical Institute) offers some technical courses at the post-high school level, and this is the nearest training facility for people in Lock Haven and other parts of Clinton County. A vocational-technical school should be constructed to serve the Lock Haven area.

Elsewhere, schools have been opened or are under construction. In Centre County, an interim program was begun in 1966 and construction on a $4.4 million building to accommodate 990 students was started the following year. In Northumberland County, a vocational-technical program has been in operation for the southern half of the County around Shamokin and Mount Carmel since 1963, but until a satisfactory site for a new building can be found, this program will continue operations in temporary quarters. In the northern half of the County, school officials joined with those in Snyder and Union Counties in 1967 to establish a vocational-technical program. Construction of a $5 million building that can handle 800 students is due to begin in 1969. Another joint program is being sponsored by officials in Columbia and Montour Counties who began construction of a $4 million facility in 1967 and expect to begin holding classes in the 640 pupil facility in 1969.

Juniata and Mifflin Counties similarly began construction of a jointly operated facility in 1967 which will have a 680 pupil capacity. Perry County has joined with its non-Appalachia neighbor, Cumberland County, to support a program that will begin in 1969.

In support of these programs the Appalachian Regional Commission has made three grants toward the construction of new facilities - to Centre County-$454,000; to Columbia-Montour-$162,500, and to Juniata-Mifflin-$574,027.

The District also has higher education facilities which provide a different level of manpower training. Seven institutions had a 34,900 enrollment in 1966, with two-thirds of the total at The Pennsylvania State University. Another 6,800 were enrolled in the three other publicly operated colleges of the District - Bloomsburg State College, Williamsport Community College and Lock Haven State College - while the remaining 3,400 students were enrolled in the three private institutions - Lycoming College, Bucknell University, and Susquehanna University.

College training, of course, requires no defense or argument since at least one college degree is now commonly required for consideration in many kinds of jobs. In terms of manpower, the presence of so many institutions appears to offer an unseen benefit beyond the immediate reward of educating young people. In and of themselves colleges attract professionals to communities whose presence is often an economic as well as cultural and educational enrichment.

Around The Pennsylvania State University, for example, the University environment has attracted both research and development funds as well as the people capable of performing the work. At Bucknell University, another example of the possible communitywide benefit is the University's proposal to build a $1.5 million computer center which could serve governmental and business needs in addition to educational requirements. The construction of a science or engineering facility related to industrial training also has been proposed.

Thus, the colleges and universities are enriching the manpower supply of the District both through education and through hiring people trained elsewhere.

NATURAL RESOURCES

Minerals have not been the dominant element in the economic development of the Central Susquehanna Basin District that they have been in many other parts of Pennsylvania. It is true that until the middle of the 19th Century Bellefonte and Lewistown had thriving iron furnaces, that western Centre and Clinton Counties have moderately thick seams of bituminous coal, that today Centre County is the leading lime producing area of the State, and that Shamokin and Mount Carmel were built by the anthracite industry.

Mining of bituminous coal in the Appalachian Highland sections of Centre and Clinton Counties by 1960 totalled 140 million tons while in Columbia and Northumberland Counties anthracite coal production had come to 525 million tons. Today, bituminous production continues at about the same level as during the fifties, while anthracite production is meagre in comparison with the past.

Beyond this list of acknowledgements, however, remain most of the District's area and a majority of the population that never were tied economically to extractive industries.

TABLE 66

1966 VALUE OF MINERAL PRODUCTION IN THE CENTRAL SUSQUEHANNA BASIN DISTRICT

County	Value	*Minerals Produced in Order of Value
Centre	$16,396,017	Lime, stone, coal, sand and gravel, clays
Clinton	2,942,513	Coal, stone, clays
Columbia	3,850,214	Coal, sand and gravel, lime, peat, stone
Juniata	-	-
Lycoming	2,091,560	Stone, sand and gravel, coal, tripoli
Mifflin	withheld	Sand and gravel, stone, lime
Montour	withheld	Stone
Northumberland	withheld	Coal, clays, stone, lime
Perry	withheld	Stone
Snyder	477,304	Stone, sand and gravel, coal
Union	withheld	Stone
Total	$28,150,000	

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*Excludes value of natural gas, natural gasoline, LP gases, petroleum, and gem stones.

Source: Pennsylvania Bureau of Topographic and Geologic Survey.

Reserves in minerals are considerable in the District and simply await additional demand before they will be mined more extensively. Some changes in technology may result in greater use of stone for "non-skid" highway aggregates and new uses for clays either as light-weight aggregates or as aluminum ores. Coal production probably will expand as production from Appalachia grows by almost three-fifths between 1964 and 1980. Deep and shallow sand gas fields of Clinton County are both producing. Economic geologists contend that many other areas of the Ridge and Valley Province may also contain gas deposits and that systematic exploration is required.

Most of the uranium prospects uncovered in the State have been in Montour, Columbia, Northumberland, and Lycoming Counties. Deposits are too small to merit production now, but discovery of additional small deposits may make mining commercially feasible.

Even allowing for some changes that may occur through either discovery of new deposits or changes in technology, there is little reason to believe that mineral extraction will become an important source of District employment. Today, mines and quarries generate only 1,500 jobs in the District - a total not likely to increase significantly in the future.

Two-thirds of the District's land is in commercial forests and 13 percent of the manufacturing jobs are in forest-based industries. In addition, there are an estimated 230 sawmills - both large and small - scattered throughout the District.

In land devoted to commercial forests, Clinton County with 82 percent and Lycoming County with 81 percent are clearly the District's leaders as they have been since the logging boom of the 19th Century. Montour County, with but 36 percent of its land in commercial forests, is at the other end of the range in the District. In terms of total commercial forest area, Lycoming, Clinton, and Centre Counties with 1.6 million acres contain well over half of the eleven county total of 2.7 million acres.

The once serious overcutting that characterized the District's counties no longer exists. By 1954, only Columbia, Juniata, Lycoming, and Northumberland

Counties were having their forests cut at faster rates than they were regenerating. Lycoming's saw timber stands were being cut at a rate of 13 million board feet faster than growth would replenish them and Columbia was a near second at 10 million board feet. Despite this serious overcutting in these four counties in 1954, the District was still growing considerably more saw timber than it was cutting: it showed a net increase of 4.45 million board feet in 1954.

By 1964, the District's forests showed better balances. All counties except Perry were showing healthy increases in that year. Lycoming County, the largest loser in the previous inventory, showed a growth of 16 million board feet in 1964, placing it alongside Clinton County. Only Centre County which showed a 21 million board feet increase was greater.

To foresters, of course, the most important factor is the kind of species present in forests. While there is no complete inventory of them in the District, it is known that nine-tenths of the total saw timber cut is hardwood. But from county to county there are different stands that tend to create different specialities. Among all the counties of the State in 1964, for example, Centre County ranked seventh in production of yellow pine and tenth in hemlock; Lycoming was seventh in basswood and beech, fifth in yellow birch, fourth in hemlock, and ninth in white oak; Perry was third in white oak, fourth in hickory, fifth in yellow pine, seventh in yellow poplar, and tenth in white pine; Juniata was tenth in hickory and Union was fourth in black walnut. In all, the Central Susquehanna Basin District produced 51 million board feet of sawtimber in 1964, a tenth of the State total.

In poletimber production the District showed healthy growing balances in both 1954 and 1964. Since today's poletimber grows into tomorrow's sawtimber, these poletimber increases assure continuing stands of future sawtimber.

While forestry today is far from the dominant industry it was in the 1870's, it is one of the area's leading natural resources and probably is destined to continue prominently in the District's economy. Forest related manufacturing jobs - in lumber and wood products, furniture and fixtures, and paper and allied products - totalled 9,900 in 1965; 5,000 of these were in the furniture and fixtures industry.

Less than one percent of the District's population was in families of farm operators in 1964, emphasizing that in the Central Susquehanna Basin District farming plays a relatively small role. Much of the terrain, of course, has never been hospitable to agriculture, particularly that on the ridges of the Ridge and Valley Province or the rugged shale derived soils of the Appalachian Highlands of Centre, Clinton, and Lycoming Counties. The valleys between the ridges are fertile. They include the Kishacoquillas Valley in Mifflin County; Nittany, Penn's, and Brush in Centre County; Nippenose and White Deer in Lycoming; and the entire valley section of Montour, Snyder, Northumberland, and Union Counties known as the Middle Susquehanna Lowlands. Here rich limestone or sandstone derived soils support some highly productive farms.

The farms of Mifflin County can boast the highest milk production per cow in the State; Perry County is second. Other District couties in the top ten are Union (fifth), Centre (seventh), Snyder (eighth) and Juniata (ninth). The significance of this productivity lies largely in the fact that dairying generates two-fifths of the money received by Pennsylvania farmers for both crops and livestock products.

Since much of the District is not good farming country, the abandonment of farming has been rapid here as elsewhere in Appalachia. Between 1954 and 1964, the number of farms dropped by a third to 9,669. The decline of land in farms was but 15 percent, however, which suggests that consolidation into larger units was often the result of families giving up agriculture.

The economic squeeze of farmers that has placed a premium on large units has been in evidence in the Central Susquehanna Basin District where total agricultural receipts increased ten percent during the 1956-65 period while personal income in the State was doubling. Constantly rising costs to farmers during a period when their sales prices were not keeping pace with these increases has resulted in their labor becoming in many cases a hidden subsidy to consumers.

In fact, in Pennsylvania during this period average farm income dropped below $2,000 in both 1957 and 1962, and it reached $3,000 in 1965 for the first time.

Of the $89.3 million paid to District farmers in 1965, four-fifths went for livestock products. Interestingly, farmers in eight of the eleven counties received from $6.6 million to $8.8 million for livestock products. A much wider range exists among the counties in crop receipts in which the large counties - Columbia, Northumberland, and Lycoming - far outstrip the others.

The persistent fall in the number of farms and the slow growth of farm income will likely continue to plague the District as long as national economic forces operate to the discouragement of small farmers.

DEVELOPMENT PROGRAMS

Since the District's resources are the basis of its livelihood, it is important that they be used wisely. In addition, the best use of them requires investments of time, money, and energy in facilities that insure the greatest return to the people. Thus, public investment programs are simply another device by which a richer, more satisfying life is achieved.

District officials have examined both past progress and future needs and have identified groups of programs in three priorities - first, second, and third. In each group, no distinctions are made in terms of importance since comparisons are at best difficult.

The first priority programs are: housing and urban renewal; comprehensive water resources management; highways and access roads; and retention of planning and development personnel.

The second priority programs are: industrial development; recreation and tourism; vocational-technical education; higher education; and mine area restoration.

Third priority programs are: airports; hospitals; and libraries.

HOUSING AND URBAN RENEWAL is placed in the first priority category because community leaders throughout the District (with the exception of State College) have become increasingly conscious of the deteriorating quality of housing and the slow rate of new construction. Poor housing is, in addition, often listed by industrial development officials as an obstacle in obtaining new businesses.

Several reports from individual communities have highlighted the growing importance of housing conditions. In Lock Haven, where several low income housing units have been constructed, a shortage of middle income housing for college professors and managerial employees is reported. Section 221 housing is needed. In Berwick, where an ordinance plant was recently opened, employees brought to the community are having difficulty finding suitable apartments and houses. Likewise in Milton, leaders report a labor shortage because housing is in short supply. The electric utility serving the area is sponsoring a development east of the Borough to help overcome the deficiency.

Poor housing conditions have existed for low income families for many years - in the District's communities and in the rural areas. In 1960, the Census of Housing reported that 71 percent of the District's housing was sound. Of the remainder, much of it was occupied by poor families, many of whom were aged.

In the hearts of many communities built when highway traffic and railroads went through the middle of the business district, urban renewal efforts are underway. And in nearby older neighborhoods, where housing has been found to be substandard, similar clearance and redevelopment projects have been started. Twelve projects - four in Williamsport, two in Lewistown, two in Danville, and one each in Milton, State College, Lock Haven, and Mill Hall covering about 121 acres are under way at an estimated total cost of $14.8 million.

Efforts to construct middle income housing have often proved difficult. In Williamsport, where construction of an apartment building for elderly low-income families is to be completed in 1970, the community has not been equally successful in initiating moderate-income housing projects. Williamsport and Berwick-Bloomsburg-Danville are now eligible for "seed money" grants from the Appalachian Regional Commission which help non-profit sponsors meet expenses in initiating projects.

In Lock Haven, a union group has already expressed interest in sponsorship of a moderate income housing project.

COMPREHENSIVE WATER RESOURCES MANAGEMENT is considered an equally important first priority program since it includes several important development facets. Among them is the District's urgent need for a regionwide sewage treatment system particularly in the communities of Union, Snyder, Northumberland, Montour, and Columbia Counties in the Central Susquehanna Valley. District leaders are still at work developing tentative solutions that will not only meet the pressing needs of today's communities but provide service for outlying areas as well. Thus, planning funds are needed to survey the cost and extent of the area's problems and to develop an areawide solution - one that would perhaps provide one or two large treatment plants served by long trunk lines to which each municipality may be connected. In addition, this solution is expected to meet the needs of industries and industrial parks of the area which today are stymied from growing by the absence of proper sewage treatment facilities.

In addition to this basinwide study, several individual communities in the District have requested Federal and State aid for the construction of treatment facilities. Among them are: College-Harris Authority ($905,400) and Howard Borough Authority ($34,550) in Centre County; Millville ($72,900) in Columbia County; Derry Township ($67,200) in Mifflin County; Mount Carmel ($83,310) in Northumberland County; West Beaver Municipal Authority ($60,380) in Snyder County; and Mifflinburg ($49,780) in Union County.

Expansion and modernization of existing treatment systems have also been proposed in Lock Haven, Bloomsburg, Mifflintown, Montgomery, Muncy, Williamsport, and Lewistown.

Part of the comprehensive water resources management envisioned by local leaders includes greater utilization of the Susquehanna River Basin so that multiple purpose reservoirs might be constructed to assure good water supply, flood control, power generation, recreation facilities, and rights-of-way for utilities and highways. Admittedly visionary, this proposal brings together many of the District's development objectives into the geographic area of the Central Susquehanna Valley. Its internal logic derives from the presence of the Susquehanna River - both the West and North Branches - which has become today little more than a collector of wastes from municipalities and industries. Even its recreation potential has hardly been tapped.

Rather than continue to deal piecemeal with development problems that all converge on the River, District leaders propose a bold approach in which many of the development costs might be borne by benefits and revenues derived from the improvements. Thus, recreation expenses might be offset by revenues from the sale of home sites. Power revenues might pay for dam construction. Parts of the river valley freed from flooding might be sold as rights-of-way for pipelines or highways.

Simultaneously, this proposal would achieve improved water quality to meet the future needs of communities and industries. Today, most of the District's communities have sufficient supplies although systems are needed in three small boroughs - McAlisterville, Thompsontown, and Liverpool. In several others, funds for expansion and renovation are needed. Among them are Bloomsburg, Montgomery, Muncy, Williamsport, Lock Haven, Milesburg, Lewistown, and Newport.

HIGHWAYS AND ACCESS ROADS are another first priority program in the Central Susquehanna Basin District because of the importance that transportation accessibility has always had for the economy of the area. Canals, railroads, and highways evolving with changing transportation modes have followed the paths cut through the District's rugged ridges by creeks and rivers. Today, most of the important transportation developments will again follow these same routes as Corridors in the Appalachian Development Highway System upgrade parts of U. S. 220 and Pa. 147 in Centre, Clinton, Lycoming, and Northumberland Counties, U. S. 15 from Williamsport north to the New York border, and all of U. S. 22 through the District in the Juniata River Valley. The District is to have 149 miles of Appalachian Development Highways constructed through its counties.

While those new high-speed highways will improve travel on the

District's age old routes and thereby create better access among economic activity areas, they will not significantly alter travel patterns. Completion of I-80 - the Keystone Shortway - will do so, however. Local officials believe that accessibility to urban markets via this route will introduce a new era of prosperity not before possible in the District.

This bounty of Interstate and Appalachian highways unfortunately will not correct all of the District's access problems. Between Selinsgrove and Shamokin Dam, for example, strip development along U. S. 11-15 has led to congestion reducing the traffic carrying capacity of the route. And in the southeast corner of the District the densely populated area in the Shamokin-Mount Carmel economic activity area has no good high-speed connections to the remainder of the District's highway system.

The problem of accessibility is, of course, not only a matter of connecting communities, but also one of connecting facilities. Thus, District leaders have expressed the need for access roads to specific facilities either being planned or constructed. Three roads are needed into industrial areas - in Northumberland County at the Milton Industrial Park, in Juniata County at the Denholm Industrial site near Mifflintown, and in Columbia County at the Bloomsburg industrial area. Two access roads are needed to recreation areas - to Lake Jean in Ricketts Glen State Park and into the Blanchard Dam recreation area.

Other access roads are needed to the Centre County Hospital, the Mid-State Airport, the Glen Burn Coal Mine Museum in Shamokin, and the Milesburg Interchange of I-80.

RETENTION OF PLANNING AND DEVELOPMENT PERSONNEL is perhaps a unique problem to the Central Susquehanna Basin District where during the latter part of 1967 and early 1968 there was a fifty percent turnover of county planning directors and development executives in chambers of commerce and related organizations.

Officials of the Susquehanna Economic Development Association point out that it is impossible to effect long range strategy and programs with such a high personnel turnover. Low salaries are cited as the major cause for leaving, and since many of the counties are relatively small, salary increases to levels competitive with other areas of the State are difficult to obtain.

One proposal by the SEDA organization is that a Government Service Bureau be established from which a variety of services can be purchased. In this fashion, several counties or communities might be served by a few experts in a larger organization. Thus, continuity of service and higher salaries would both be possible. (In addition, this Bureau is seen as a means of providing a variety of other municipal services - from accounting to garbage collections - and by introducing economies inherent in large-scale operations, giving more services for less money than communities can furnish themselves.)

INDUSTRIAL DEVELOPMENT is a second priority program in the Central Susquehanna Basin District, not because it is less important than others listed above, but rather because both industrial parks and promotion programs are already so well advanced. Indeed, filling those parks is thought to rest on accomplishment of such first priority objectives as supplying sewage treatment facilities and access roads to them.

Scattered through the District at Mount Carmel, Shamokin, Berwick, Milton, Williamsport, State College, and Lewistown are seven existing industrial parks to which 41 plants have already been attracted. There are in addition other industrial sites in various stages of development, including six sites in Northumberland County - one each near Mount Carmel, Shamokin, Sunbury, Northumberland, Milton, and Watsontown. In Lycoming County there are three sites near Williamsport, Muncy, and Montgomery, and in Clinton County there are also three available industrial sites at Mill Hall, Beech Creek, and Jersey Shore. In other counties, individual sites are also available for development. Among these are sites near Selinsgrove in Snyder County, in Kelly Township in Union County, near Lewistown in Mifflin County, between Berwick and Bloomsburg in Columbia County, and near Philipsburg in Centre County.

Thus, the District's development officials have taken the most important initial step in industrial development by acquiring promising industrial land. Now the most important task is to provide access roads, utilities, and related improvements.

Toward that end one existing industrial park - the Milton Industrial Park - a 700-acre tract recently annexed by Milton Borough, needs water and sewer lines extended through it. Site development funds for utility lines and road construction also are being sought for other industrial sites at Shamokin, Mifflintown, Sunbury, Lewistown, Williamsport, Bloomsburg, and Philipsburg.

Other projected efforts by development groups throughout the District include a proposal to provide flood protection in the western part of Bloomsburg so that industrial development can occur, a request for aid to the Lewisburg Chamber of Commerce which is formulating plans for an industrial park, aid to the State College-Bellefonte Industrial Development corporation which seeks a site between the two communities, and a proposal for a research park near State College.

RECREATION AND TOURISM is another second priority program in the District. With over two-thirds of the District's land in forests, much of the land in rugged mountain scenery, long stretches of the State's largest river system, and trout streams feeding it in every county, the Central Susquehanna Basin District is a natural recreation area. Already much has been done to exploit this natural attraction. Eleven state parks have been developed in seven of the District's counties; they contain 7,400 acres and attracted 1.2 million visitors in 1966.

This acreage is not distributed evenly since Juniata, Northumberland, Montour, and Columbia Counties contain no parks. For the most part,however, their populations are served by parks nearby in adjoining counties.

State parks are not, of course, the only places of recreational pleasures, a fact highlighted by a unique proposal of the Susquehanna Economic Development Association. This group wishes to attract tourists to the District by identifying at least a thousand points of interest which would be marked with signs, mapped, and described in regional guidebooks distributed at information and hospitality centers. Thus, dairies, mills, factories, historical sites, scenic views, public buildings, and related places would become part of the District's recreational facilities.

District leaders have proposed that the Susquehanna River be developed into a major tourist and recreation attraction.

Lesser projects also have been proposed. Swimming pools are needed in Briar Creek Borough, Bloomsburg, and Millville. Marinas on the Susquehanna at Berwick and Bloomsburg have been proposed, and between Berwick and Danville (in the absence of reservoir construction) the River needs to be dredged for better boating.

At three tributary reservoirs - Plum Creek near Sunbury, Honsel's Run near Milton, and Briar Creek near Berwick - funds for recreation facilities are needed so that multiple development can be achieved.

VOCATIONAL-TECHNICAL SCHOOLS and HIGHER EDUCATION are both second priority programs in the Central Susquehanna Basin District. Existing facilities and proposed improvements were discussed in the manpower section of this chapter. In addition, more studios and other facilities are needed by WPSX, the educational television station at The Pennsylvania State University.

MINE AREA RESTORATION, including abatement of stream pollution caused by mine acid drainage, is the last of the second priority programs in the District. The southeastern section of Northumberland County and southern Columbia County around Shamokin and Mount Carmel has suffered the most extensive damage from mining. This is where most State and Federal attention has been concentrated. The Appalachian Regional Commission has made grants to help extinguish the Centralia and Mount Carmel mine fires.

Among the other problems in this area are the Coal Run mine fire and mine drainage pollution. The mine fire project will cost an estimated $1.4 million. As yet, cost estimates for mine acid pollution abatement in the area's creeks have not been developed.

In the bituminous coal mining section at the far western edge of the District one strip mine reclamation project has been undertaken in Sproul State Forest. In the Renovo area, District leaders have proposed that mine acid drainage into the Sinnemahoning Creek be corrected to restore the stream's recreational value.

AIRPORTS are a third priority program in the Central Susquehanna Basin.

Among existing facilities are two airports with regularly scheduled airline service - Williamsport-Lycoming County Airport and Mid-State. Three airlines serve the Williamsport facility while one serves the Mid-State airport in western Centre County. In addition, there are three other public airports - at Lock Haven, Bloomsburg, and Selinsgrove - and 33 private airstrips.

Improvements to these facilities which have important development implications include expansion of the Shamokin-Mount Carmel airport which is adjacent to the Shamokin Industrial Park. In Lock Haven, a lengthening of the runway will be an important improvement in serving the needs of a light plane manufacturer. New or expanded airport facilities are needed to serve the Milton-Lewisburg and Bloomsburg areas.

HOSPITALS are another third priority program in the District. There is a large State institutional component of which there are six hospital facilities with approximately 5,300 beds. There are eleven community hospitals with 1,963 beds to which local citizens look for their medical care. Many of these hospitals are in need of expansion and modernization.

Recently, the Jersey Shore, Sunbury, and Centre County hospitals have all received grants from the Appalachian Regional Commission. Another expansion program is in progress at the Berwick General Hospital.

In Clinton County, a 160-bed infirmary estimated to cost $2.5 million is needed in Lock Haven. A quarter of the facility's beds will be leased to the Lock Haven Hospital for extended care patients. At Renovo, a $600,000 addition to the community hospital is needed both to replace worn out facilities and to add new services.

At Danville, the Geisinger Medical Center accounts for about half of the patients admitted to the District's eleven community hospitals and is noted for providing specialized medical services. A $6 million addition is proposed to enlarge this District asset. And at Lewistown, a new addition is proposed to the community's 207 bed hospital.

LIBRARIES are the last of the District's third priority programs. According to estimates of books and library services provided for local citizens by the 24 public libraries in the District, only Centre, Juniata, Mifflin, and Montour Counties meet State minimum standards. Measured in terms of people, the District's total facilities are sufficient only for about three-fourths of the existing population.

Within each county, of course, individual community libraries vary considerably in size and quality. The Williamsport Library, for example, contains over a third of the 655,000 volumes in the District's community libraries. In several communities, college libraries augment local holdings and are available for reference by community residents.

In the past the Appalachian Regional Commission aided in construction of library facilities at State College and Shamokin-Coal Township.

A regional library to serve community libraries in the counties surrounding Williamsport (estimated to cost $1.2 million) is proposed for the District by the State Library. This facility is intended to help improve services especially in communities not now meeting State standards.

DISTRICT DEVELOPMENT STRATEGY

The Susquehanna Economic Development Association acts as the District-wide development and planning agency and has set as its goal raising per capita income from the second to the top quartile. To achieve this goal during the coming decade, the organization has charted an ambitious program.

First, it has begun formulating District goals through preparation of discussion papers. Already papers have been prepared and distributed to 1,850 people in the District on Water Resource Management and Economic Development in the Susquehanna River Basin, High School Students and Community Development, Building and Promoting Travel-Tourist-Recreation Business, A Highway System for Economic Development, and Regional Industrial Districts. Additional papers are being prepared on subjects such as A Sustained Yield Forestry Program, A Regional Application of Third Generation Computer Services to Local Government, A Program for Obtaining Optimum Size Farming Enterprises, Mass Transit, Inter-Governmental Cooperation, SEDA Regional Development Task Force, Civic Beautification, and Anti-Poverty Work at the Regional Level.

Second, it proposes both adult and student education programs on community development objectives and techniques.

Third, it hopes to strengthen community development organization through creation of Community Development Commissions staffed with a coordinator whose function would be to promote the Development Commission's goals.

Fourth, it proposes to create a SEDA Trust Fund for use in financing creative development proposals, and to use the earnings of the Fund to finance SEDA operating expenses.

Fifth, it proposes organization of a Government Services Bureau (described earlier) which will enable small units of government to provide a wide range of services to their citizens at moderate costs through economies of large scale operations.

Finally, SEDA officials are making specific proposals in each of their discussion papers which will ultimately be brought together in a comprehensive development plan.

NORTH CENTRAL LOCAL DEVELOPMENT DISTRICT

The North Central Pennsylvania Economic Development District with 5,089 square miles of area is the fourth largest of the Pennsylvania local development districts. Its heavily wooded, rugged Appalachian Highland terrain comprises a seventh of the land in Appalachia Pennsylvania while its 241,800 people are but four percent of the population. Natural resources - timber, coal, oil and gas - drew settlers to the District's six counties and created an economy which is no longer the basis of much employment.

The counties of the District - Cameron, Clearfield, Elk, Jefferson, McKean, and Potter - enjoyed natural resource booms in stages. All of them were subject to the indiscriminate axe wielded for the 19th Century timber industry when the virgin pine and hemlock forests were decimated. McKean County became the center of oil discovery by the end of the Century as well. Potter, Elk, and Jefferson Counties also became oil and gas producing areas but on a much smaller scale.

The impact of oil discovery like gold strikes in the West caused a mushrooming of population between 1870 and 1900. McKean County jumped from 8,800 to 42,500 between 1870 and 1880. Elk and Potter, each on the periphery of the boom, almost doubled during the 1880-1900 period.

Farther south, bituminous coal mining in Clearfield, Jefferson, and Elk Counties was less a boom than the promise of sustained employment, but it too drew migrants early so that Jefferson reached its peak population of 60,000 in 1910 and Clearfield a decade later hit 103,000.

Today, these earlier events are much in evidence. Over half of the total population is still to be found in Clearfield and Jefferson Counties and another sixth is in McKean County concentrated around the City of Bradford.

Production from coal mines remains near peak levels in Clearfield County and continues to be substantial in Jefferson County, while McKean County's petroleum production declines with each passing year but still accounts for over half of the State total.

Thus, oil field equipment, coal refuse piles, and acid impregnated streams are reminders of this natural resource history. The ravages of early lumbermen are not so clearly in evidence since second growth hardwoods have regenerated the District's forests.

Although a look to the past may help to explain the present, in the North Central District as in several other sections of Appalachia Pennsylvania the present economy has little relation to the natural resources that were the reason for first settlement. Both coal mining and oil field employment continue to decline, and despite the fact that 86 percent of the District land area is in commercial forests, the timber industry is an insignificant source of employment.

The shale derived soils of the deeply dissected Appalachian Highlands have generally not been hospitable to agriculture so that once the timber was cut, farmers did not finish the job of clearing the land. Consequently, today only four percent of the land is in cropland and 3,200 people earn a livelihood from agriculture, the smallest number of farmers among the seven local development districts in Appalachia Pennsylvania.

Instead of natural resource related employment, the District now is characterized by manufacturing jobs which provide 35.7 percent of all employment. Fully a third of these factory jobs derive from a fortuitous meeting at the turn of the Century between some wealthy people of Saint Marys and a young engineer from Cleveland interested in the transfer of electrical energy to motors. They backed him in a carbon company which utilized locally available natural gas and the petroleum coke residue from Bradford oil refineries. Soon after this factory opened its doors, another young man was similarly backed in opening a battery plant which used carbon from the first plant. After a few years of operation, the second plant began carbon manufacture as well.

Since the early part of this Century, the two plants have continued a healthy competition and have spun off at least three other carbon and graphite producers plus ten firms producing sintered metal in Saint Marys and Elk County and beyond. Related firms are found in DuBois, Ridgway, Punxsutawney, Kane, Brockway, Bradford, Emporium, and Roulette (Potter County). These are plants either started by former employees of the two leading firms in Saint Marys or branch operations of those Saint Marys firms which produce special products developed by their research departments.

Today, the continued growth of this industry is marked by major expansions of both major companies in Saint Marys and the continued springing up of new small companies despite the fact that the early natural resource base has now waned. Petroleum coke has to be shipped from distant refineries and electric power, another major expense in carbon manufacture, is somewhat more expensive than in several other areas of the Nation.

But the number of technicians is considerably smaller than in many other industries so they tend to cluster and benefit by that close proximity. And it is through this clustering of managerial and technical talents that the District obviously has benefitted, because it is the people with technical knowledge who have created new products and new sources of employment which have, in turn, brought such prosperous conditions that there are now complaints of labor shortages.

These developments of the carbon, sintered metal, and electronic components industries in the North Central District are undoubtedly the most desirable kind of industrial development since they produce new products for expanding industries. Not only do they produce the traditional carbon and graphite parts for electric motors, but the demands for graphite electrodes in the production of high grade steel and the electrolitic anodes required by the chemical industry have mushroomed. A wide range of other products are produced including resistors, capacitors, and electronic components. The sintered metal industry which produces bearings, gears, pinions, and many other items from pressed metal powder has also grown out of the enterprise and knowledge of the carbon industry.

From the standpoint of economic development, the North Central District seems as dependent on the fortunes of the carbons, sintered metal, and related industries as are other areas upon steel, fabricated metals, and similar other industries. Hence, more detailed knowledge of the constraints affecting the carbon and sintered metal industries and means of overcoming them appear to be an essential step in development planning. Ancillary to this analysis is an understanding of the spin-off potential that may be encouraged just as new carbon companies and sintered metal producers have evolved out of the original carbon technology of the area. Some such understanding is necessary for the District to capitalize on its current specialization in an industry with excellent growth prospects.

To be sure, the District's economic activity areas have not benefitted evenly from this industry. Indeed, there are counties where its impact is far overshadowed by other sources of employment - often small, low wage paying, female employing factories in slow growth industries. Even so, the carbon industry, its branch plants, and technically related offspring, have spun an economic web that reaches into almost every economic activity area.

ECONOMIC ACTIVITY AREAS

BROCKWAY-BROOKVILLE-DUBOIS is the largest of the North Central District's economic activity areas. It is a triangular shaped section of Jefferson and Clearfield Counties dominated by the District's second largest community, DuBois (population 10,600 in 1960). Brookville (population 4,600), Reynoldsville (population 3,100), and Brockway (population 2,500), all in Jefferson County, are the other economic activity centers comprising this economic activity area. In all, there is a central city and urban fringe population of approximately 30,800 and an additional rural hinterland population of 8,300 living in this section of central Pennsylvania which for the first time in its history is being opened by a major transportation route.

I-80, the Keystone Shortway, mentioned in connection with several other northern Pennsylvania local development districts, promises Clearfield and Jefferson County communities their first direct transportation connections to out-of-state markets - connections superior to those offered by rail carriers in past decades. DuBois and Brookville will benefit the most since the route passes about two miles north of each community. And a long-advocated reconstruction of Pa. 28, called the Allegheny Valley Expressway, may one day connect Pittsburgh with Brookville and give this economic activity center prominence as a highway hub in north central Pennsylvania.

All of this economic activity area's communities have histories long associated with bituminous coal mining. Clearfield County since 1881 and Jefferson County since 1886 have been among the State's counties producing over a million tons of coal annually, and today as that activity continues, strip and auger mining is particularly noticeable through the countryside. Clearfield was the leading strip mining county in Pennsylvania with 5.8 million tons produced in 1965 and Jefferson was fifth with over a million tons produced from open pits.

Yet mining employment for both counties in this same year was only about 2,700, less than seven percent of total employment. Ancillary services such as mining equipment repair and sales and trucking undoubtedly are generated by this continuing mining activity, but the primary source of wages in the economic activity area long ago shifted to manufacturing and service enterprises. In DuBois and neighboring Falls Creek and Sandy Township, there are 27 plants with about 2,500 employees involved in the manufacture of instruments, wiring devices, textiles, fabricated metal products, vitreous china, and other products.

In Brookville and the three surrounding townships, there are 20 small plants with about 600 employees, the largest of which is a television tube manufacturer with 220 employees. In Reynoldsville and surrounding Winslow Township, there are 12 factories with over 500 employees, and again the largest manufacturer with over 200 employees produces television tubes. In Brockway and surrounding Snyder Township, the economic activity area's largest employer is among the six industries that have over 1,500 total employment. This industry, a manufacturer of glass containers, is the source of almost 1,300 of the jobs around Brockway.

This economic activity area has a widely diversified manufacturing economy which provides 5,100 jobs in 65 different plants. In both Reynoldsville and Brookville, at least two-thirds of the jobs are held by women, while men hold that proportion in DuBois and Brockway. Hence, from the standpoint of a family seeking employment in the area, a wide range of opportunities exists within a commuting range of no more than 20 miles - the greatest distance between any two of the economic area's activity centers.

In DuBois, Brockway, and Sykesville, plants have opened that are the offspring of the carbon and sintered metal industries in Saint Marys. Small sintered metal plants in both Brockway and Sykesville and an electronic component producer in DuBois evolved from the Saint Marys complex. Since both of these industries have numerous applications in both space and nuclear technology and are having many new applications developed regularly, this economic activity area should be able to capture even more jobs.

Other factors of importance to the area are the recently completed improvements to the DuBois-Jefferson County Airport and the planned Otocsin Recreation Area at the S. B. Elliot Interchange on I-80, a multiple-use area that is expected to attract 150,000 people during a peak weekend when completed.

RIDGWAY-SAINT MARYS-JOHNSONBURG is an economic activity area with a population of 35,400 and is the District's second largest. It is in Elk County near the geographic center of the six-county area - a fitting location since its economic influence is felt in five of the six counties. Three boroughs - Saint Marys (population 8,000), Ridgway (6,400), and Johnsonburg (5,000) - an urban fringe of 10,300, and a nearby rural hinterland of 6,000, comprise 91 percent of the County's population and a seventh of the District total.

Early settlers were timbermen, but by 1870 when an oil well was drilled near Ridgway, others came to get rich. Early chemical industries were attracted by the presence of natural gas and waste hardwood and at the turn of the Century the area had one of the Nation's leading chemical complexes. This was the same period during which the area's structural carbon industry was born.

The County's population leaped from 8,400 to 32,000 between 1870 and 1900, and then showed little growth until 1960 when it reached 37,000. During the sixties, it has increased by about 2,000, according to recent State Planning Board estimates.

All of the District's important natural resources are present to some extent in the County - timber, oil and gas, and coal. About 92 percent of the County is covered by commercial forests, half of which is in the Allegheny National Forest, State forests, or State game lands. Less than a hundred oil wells which produce 32,000 barrels annually are concentrated in the northern part of the County, while to the south around Weedville and Force the County's coal mining production is concentrated. Total annual production is less than a half million tons annually and employment is less than two hundred miners.

If today's manufacturing economy in the Ridgway-Saint Marys-Johnsonburg economic activity area bears little resemblance to this natural resource heritage, it was nevertheless shaped by it. An mentioned above, natural gas and petroleum coke from Bradford refineries were important raw materials for the carbon industry, and the District's forests were the basis of the early chemical and the later paper manufacturing industries at Johnsonburg.

A single paper mill with employment of 875 accounts for 90 percent of the manufacturing employment in Johnsonburg. To the southeast in Ridgway where there are eleven manufacturers, there is no dominant employer. Instead a sintered metal plant, a dye producer, a veneer producer, an asbestos factory with one to two hundred employees and seven lesser plants provide about 830 jobs in the Borough.

Saint Marys and surrounding Benzinger Township with 31 plants and 7,000 jobs contain three-quarters of the County's manufacturing jobs. A carbon manufacturer producing electronic components accounts for over 3,300 of these jobs, while three other carbon and graphite producers employ 1,600. Five sintered metal plants employ about 1,300, and an electric lamp manufacturer has over 400 employees.

The two largest employers have major expansion programs underway but indicate that future growth will depend on the availability of labor which has been in critically short supply for the past five years. The estimate of one local observer is that currently 25 to 30 percent of Saint Marys factory workers come from other communities, some of them outside the County, such as DuBois, Clearfield, Kane, and Emporium.

A shortage of good housing is said to aggravate this situation and local builders have been unable to build on a large enough scale to satisfy existing requirements. Consequently, at least two of the major local employers purchase housing for resale to new employees they bring to the community.

The BRADFORD economic activity area is the District's third largest with a population of 29,200 and is linked with the District's two larger economic activity areas by U. S. 219, a north-south two-lane highway cutting through the center of the District.

The City of Bradford (population 15,000 in 1960), the District's largest city, is at the center of an urban area that includes most of Bradford and Foster Townships which have an additional 11,000 people. The rural hinterland of this economic activity area, like that of the Ridgway-Saint Marys-Johnsonburg area, has a small population because much of the western part of McKean County is in the Allegheny National Forest. Only an estimated 3,200 people live in the rural sections of Lewis Run Borough and Keating and Fayette Townships.

Bradford's growth came with the oil boom of the 1870's which increased McKean County's population almost fivefold in one decade. By 1900, Bradford City had 15,000 people and remained that size until the mid-nineteen twenties when secondary recovery methods allowed oil production to increase from about two million barrels annually to more than ten million. By 1930, the City's population hit 19,300 as a result of this second boom. Since then, the population in the City has fallen - 2,000 during the thirties and another 2,000 in the fifties. During the first five years of this decade, this trend appears to have continued with an 1,100 loss by 1965.

Joblessness in the area was undoubtedly responsible for this continued population loss. In 1960, when the unemployment rate in McKean County was 7.0 percent and the State's was 8.0 percent, it was the first time in years that the County did not exceed the State rate. The following year one in nine local workers was out of a job. Not until 1965 did the jobless rate drop below six percent.

In contrast to those sections of Appalachia Pennsylvania where layoffs or plants closing were responsible for unemployment, the Bradford economic activity area was actually increasing its manufacturing employment during the early sixties. Manufacturing employment increased by 800 jobs while non-manufacturing declined by 1,400.

Many of the non-manufacturing jobs lost were in oil field employment - primarily male employment - while the manufacturing increases were greatest in industries employing large proportions of women. Thus, male wage earners may have decided to move elsewhere for work at the same time that housewives decided to take new, low-wage paying factory jobs.

Economically, Bradford's oil fields have been similar to the coal fields of other Pennsylvania counties where the need for workers has rapidly declined and caused high unemployment rates. Now the number of oil field workers remaining is small - 1,200 - and even further layoffs cannot affect the area deeply because manufacturing has become the backbone of the economy.

By 1965, 39 percent of all jobs were in manufacturing. Five-eights of the total were in Bradford and nearby Bradford Township in 42 plants with 5,300 jobs. Two plants producing electronic components provide nearly 1,500 jobs. Two large and several small fabricated metals plants provide an almost equal number of jobs, while one large and six smaller non-electrical machinery plants employ almost 600 workers. The petroleum refining and chemicals industry of the area provides less than 600 jobs.

Inasmuch as the known recoverable reserves in the 110,000 acre Bradford oil field are likely to be exhausted before 1980, the local oil refinery may soon be without a local source of petroleum, an eventuality which local officials might wish to plan for so that the 400 workers there are not suddenly unemployed.

Bradford has a branch plant of one of the Saint Marys carbon manufacturers which produces electronic components. Its other electronics plant is a branch of a larger nearby organization with headquarters in Corning, New York.

New developments expected to stimulate economic development in the activity area include improved facilities at the Bradford Airport (which has scheduled airline service), an expanding branch campus of the University of Pittsburgh, and development of the Allegheny Reservoir Recreation Area.

The CLEARFIELD-CURWENSVILLE economic activity area in central Clearfield County with 26,600 people is the fourth most populous of the North Central District's economic activity areas. In addition to Clearfield (population 9,300) and Curwensville (3,200), an estimated 8,000 people live in urban fringe areas around these two communities while another 6,100 persons live in the rural hinterlands.

Along with the rest of Clearfield County, the Clearfield-Curwensville economic activity area has a long history of lumbering, mining, and agriculture. The exhaustion of virgin timber brought an end to much of the forest industry at the beginning of the 20th Century leaving a void filled by mining and railroading. Mining in particular became an important source of employment as production exceeded a million tons annually well before the turn of the Century. And the County's production has been sustained at above a million tons annually since then, with a peak of 8 million tons having been achieved in several years, the most recent being 1948.

The 10,900 miners employed in 1919 dropped to 2,000 by 1966, causing a steady dislocation of manpower over four decades. Introduction of labor saving machines is much of the explanation, but in Clearfield County there was also the switch to open-pit mining which as early as 1946 accounted for half of the County's total coal production. Giant shovels stripping away the earth overburden both replaced miners and reduced the cost of mining to as much as one-third of underground mining. Because Clearfield County's high quality coals are relatively near the surface, today five-sixths of the County's production comes from strip mines.

Since Clearfield-Curwensville economic activity area is in the heart of these coal fields, many of its residents have suffered with the decline of mining employment. Other jobs did not quickly appear. Manufacturing, for example, provided 3,300 jobs in 1919, a number that grew only 500 by 1930 while mining jobs were being cut in half. Half of these factory jobs were in the many brick, structural clay tile, and clay refractories using the clays found under the County's bituminous coal deposits.

By 1940, when manufacturing jobs had increased by only 300, mining employment continued to decline. Each sector now provided slightly over 4,000 jobs. War production in 1951 had brought 2,000 new manufacturing jobs to the County when a peak of 6,200 were employed in a large number of relatively small plants. Still brick, tile, and other clay products were the largest industrial sector with 2,400 of the total, but during the fifties nearly 1,000 jobs were lost in this industrial group while the County's manufacturing employment dropped by 500.

By the mid-sixties, employment in manufacturing had increased by 500 jobs but not without considerable dislocation and unemployment in the early sixties - 14.5 percent of the work force unemployed in 1962. While the national economic upswing is thought to be generally responsible for improved employment conditions, locally the Keystone Shortway which is rapidly nearing completion is considered an important factor in the area's fortunes since it will give better access to metropolitan markets.

Approximately 840 new jobs are expected in the economic activity area when new plants that have recently located there are in full production, and more than 160 additional jobs are expected from announced plant expansions. The introduction of an electronics firm in Clearfield has already brought 330 new jobs to the area and in adjacent Lawrence Township a sheet metal works has already added 50 workers.

The leading source of manufacturing employment in the Clearfield-Curwensville economic activity area is apparel. Two mills in Clearfield with 270 workers and two others in Curwensville with 410 employees provide these jobs that are mostly held by women. Electrical equipment manufacture, similarly a female employing industry, provides about 400 jobs locally as do clay refractories. Food processing plants employ about 350 while a paperboard mill in Clearfield has 250 workers.

Among the non-manufacturing developments expected to help the area is the construction of the Otocsin Recreation Area which will be located between Clearfield and DuBois at an interchange of the Keystone Shortway. In the 1970's, 950 jobs are expected with another 1,900 developing in ancillary services.

QUEHANNA SPECIAL ECONOMIC AREA in northern Clearfield County is less an economic activity area than it is a facility of economic potential. The

Curtis-Wright Aircraft Company acquired a 52,000-acre tract from the State in Clearfield, Elk, and Cameron Counties for a jet engine testing facility in 1955. Originally intended to contain both a plant and new town, the facility never achieved expectations although employment rose to around 1,000. Over 300,000 square feet of industrial, laboratory, office, and storage space were constructed and later abandoned in 1962 when the company found it no longer economical to operate.

Most of the large tract of land has been reacquired by the State as have the buildings which are now occupied by a food processor, a light aircraft manufacturer, and a nuclear materials producer. The aircraft manufacturer is a branch of a Lock Haven organization and expects to have 400 employees at Quehanna by early 1969. The food processor expects to build up to 200 employees by the following year, while the nuclear materials organization which was drawn to Quehanna because of the presence of a nuclear reactor, recently obtained a $220,000 loan from the Pennsylvania Industrial Development Authority to build additional facilities and provide 100 new jobs.

Quehanna is unique in its location away from populated centers, but it is similar to several other places in Pennsylvania where departing industries have left valuable buildings. In some cases, a small public investment in supporting facilities gives these buildings great development potential for new jobs. At Quehanna, the aircraft manufacturer needs an airstrip to realize the full productive potential of the facilities it is leasing.

PUNXSUTAWNEY is an economic activity area in Jefferson County. About 8,800 people live in Punxsutawney while the urban fringe population of 2,500 and the hinterland population of 4,200 add together to total the 15,500 population of the economic activity area.

Punxsutawney is in the heart of extensive deposits of the Allegheny

Series of bituminous coals 350 feet thick which contain seams of two Freeports, three Kittannings, the Clarion, and the Brookville coals. Some of the deposits six to seven feet thick are exhausted but much averaging four feet is still to be mined.

Like Clearfield County, Jefferson County is a major strip mining county - fifth in the State. Mining employment is less than 600 and is decreasing constantly as larger shovels are introduced to produce more coal with fewer employees.

Punxsutawney's manufacturing employment structure reflects the area's mining specialization in that the major plants employ large numbers of women - wives and daughters of miners. Electrical machinery and apparel with 587 of the area's 918 manufacturing jobs have 437 female employees. However, in the area's 16 small industries with 331 employees there are only 40 jobs held by women.

It is therefore not surprising that the County's per capita income is below the State average. Wages and salaries paid by Punxsutawney manufacturers average $3,826 annually per manufacturing employee as compared to $5,391 in DuBois twenty miles to the north.

One of Punxsutawney's three important employers is a carbon and graphite branch plant which produces battery electrodes and welding and cutting carbon. It is part of one of the large carbon corporations with headquarters in Saint Marys.

KANE-MOUNT JEWETT is an economic activity area in western McKean County near the Allegheny National Forest and strategically located to capitalize on the tourist potential of the Forest and the Allegheny Reservoir and Recreation Area.

The 9,400 economic activity area population includes Kane (5,400), Mount Jewett (1,200), and a small urban fringe estimated at 400. In the rural hinterland live another 2,400 people.

The electrical machinery industry in Kane employs 900 people in a single carbon plant which produces industrial controls. A pressed and blown glass plant in Wetmore Township with 125 workers and a furniture manufacturer in Kane with 118 employees are the other principal sources of jobs. In all, the activity area has about 1,500 manufacturing jobs, half of which are held by women.

Kane, like other McKean County communities, was once a boomtown when the shallow sand oil fields surrounding it were tapped in the 1870's. Likewise, logging brought a temporary prosperity before the turn of the Century, but today the local economy depends on manufacturing employment.

EMPORIUM is an economic activity area in central Cameron County which contains 85 percent of the County's 8,000 population. The activity area includes Emporium with a population of 3,400, 2,700 people living in the adjacent urban fringe, and 700 others in the heavily wooded and rugged hinterland.

Timber brought settlers to the area somewhat later than in adjoining counties, but by 1890, Cameron County had 7,200 people. In the decades which followed, the population has fluctuated around this total although since 1930, when it dropped to a low of 5,300, it has steadily increased to the 8,000 estimated in 1965.

A deep sand gas exists in the southwestern corner of the County and elsewhere small deposits of coal are present, but neither activity is an important source of employment. Instead, the residents of this rugged plateau county that is 95 percent covered by commercial forests depend on manufacturing industries for a livelihood.

Over 60 percent of the County's workers are employed in manufacturing while the State average is 34 percent. This dominance of factory work probably explains the unusually high level of household income in the County - $8,677 compared to $8,530 for the State as estimated by Sales Management for 1966. And according to the Pennsylvania Department of Internal Affairs, Cameron County was eleventh among the State's counties in per capita income in 1963, the last year for which estimates are available.

Most of the County's economic activity is in Emporium where the most important employers are a producer of radio and television electron tubes (1,700 employees), three plants with 217 workers producing heating equipment and metal stampings, and two plants with 125 employees producing wire and iron and steel forgings. (A new sintered metal plant with 15 employees has recently opened, again pointing to this specialty in the District.) Smaller firms specialize in lumber and wood products and in industrial machinery.

Trade and service employment, by contrast, is disproportionately low in Cameron County. Only nine percent of the County's personal income is estimated to derive from these employment sectors while the State average is 18 percent. Hence, there probably is a substantial amount of spending in neighboring counties where shopping facilities are more extensive.

Local officials have expressed interest in improving housing, recreation, shopping, and vocational education facilities. These improvements are seen as necessary for diversification and decreasing the community's dependence on a single plant which provides three-fourths of all factory jobs as well as a means of providing more jobs for men in a local economy where half of the factory jobs are held by women.

PORT ALLEGANY in eastern McKean County was an early timber community, and although it lies a few miles east of oil bearing sands, experienced the oil boom of the 1870's. The whole Port Allegany economic activity area contains only 4,500 people of which 2,700 live in Port Allegany, 800 live in the urban fringe and another 1,000 reside in the hinterland.

Virtually all of the 923 manufacturing employees work in two glass plants which have 95 percent of their jobs filled by men. Six smaller firms with combined employment of 75 emphasize the importance of the two glass plants.

COUDERSPORT is an economic activity area which is the Potter County seat and has a population of 3,500 - 2,900 in Coudersport and 600 in adjacent communities.

GALETON is an economic activity area in eastern Potter County with a 2,300 population, 1,600 of whom live in Galeton Borough.

These two communities developed as service centers to the lumber industry which hit a peak before the turn of the Century. In 1900, the Potter County population was 31,000, twice the total estimated for 1965. Now lumbering is of small economic significance despite the fact that four-fifths of the County is today in commercial forests. Agriculture is of limited importance since there are only 550 farms in the County, but with an average size of 200 acres they are among the largest in the State. Dairying is the major source of farm income, followed by seed potatoes, a long-time specialty of the County's farmers. Food processing plants in both Coudersport and Galeton are directly related to production from the area's farms.

Four State parks, including the popular Denton Hill ski area, attract thousands of visitors to the County and have given impetus to recreation-service industries.

About 600 of the County's 1,300 manufacturing jobs are in Galeton where a single radio and television electron tube producer employs 510. Lumber, wood, and food processing firms provide most of the remaining jobs.

Coudersport has only 218 of the County's factory jobs. The largest employer is a leather tanning and finishing plant. In nearby Roulette Township a branch plant of a Saint Marys carbon firm has a plant employing 120.

Potter County's people are generally poorer and older than the State average. In 1966, Sales Management estimated the County's average household income at $6,364, making it 60th among the State's 67 counties. About 29 percent of the County's families had incomes less than $3,000, while the State average was 18 percent. And only 11 percent had incomes in excess of $10,000 although the State proportion was 20 percent.

If Potter County shares these conditions with neighboring counties, it undoubtedly shares their causes, some of which are: (1) an industrial base characterized by low wage, female employing industries (over half of the total in Potter County); (2) a disproportionately large share of income earned from farming (8 percent in Potter compared with one percent in the State); (3) a substantial amount of unemployment (7.5 percent in 1967); and (4) an aging population (13 percent over 65 compared to 10 percent in the State and only 38 percent in the 20-54 group compared to 45 percent for the State).

PEOPLE

The North Central District's estimated 241,800 population in 1965 was one percent less than in 1960. Thus, during the early sixties the District continued to lose population at about the same rate it experienced in the fifties when it declined by 2.3 percent.

The losses were spread unevenly through the six counties. As might be expected, those counties where extractive industries are declining - Clearfield, Jefferson, and McKean - have been large losers. Potter County with its small population is perhaps the most consistent loser while Cameron and Elk with their almost total reliance on manufacturing have shown equally as consistent population increases.

Population projections for 1975 in the North Central District based on employment projections show a reversal of the population losses in all of the District's counties except Potter where the downward trend is expected to continue, though at a slower rate.

TABLE 67

NORTH CENTRAL DISTRICT POPULATION SUMMARY

County	1950	1960	1965	1975
Cameron	7,023	7,586	7,700	8,000
Clearfield	85,957	81,534	81,500	82,000
Elk	34,503	37,328	38,400	41,200
Jefferson	49,147	46,792	45,400	45,700
McKean	56,607	54,517	53,300	54,200
Potter	16,810	16,483	15,500	15,000
District Total	250,047	244,240	241,800	246,100

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board estimates.

The expected 7.2 percent growth in Elk County is the largest increase among the District's counties and undoubtedly reflects the expected growth of the County's carbon, graphite, and sintered metal industries. To some extent the projected increases in other counties also are explained by expected growth in these industries as new branch plants are established and old ones are expanded.

The quality of these new employment opportunities will have much to do with the population composition of 1975. Especially important is the ability of the District's economic activity areas to attract and hold young people entering upon their careers. Here the experience of the fifties is the most recent statistical information, but during that decade 39 percent of the 36,250 people who left the North Central District were 20 to 29 years of age. The projected out-migration for 1965-75 is only one-third of the fifties total, so even if the same high proportion leaving are young, the total will be only about 4,000 instead of the 14,220 young persons who left between 1950 and 1960.

TABLE 68

OUT-MIGRATION FROM COUNTIES IN THE NORTH CENTRAL DISTRICT

County	1950-60	1960-65	1965-75
Cameron	- 700	- 300	- 300
Clearfield	-14,100	- 3,800	- 4,500
Elk	- 3,600	- 2,300	- 1,700
Jefferson	- 7,250	- 3,200	- 2,100
McKean	- 8,400	- 3,500	- 2,100
Potter	- 2,200	- 1,700	- 1,500
District Total	-36,250	-14,800	-12,200

Source: U. S. Bureau of the Census; Pennsylvania State Planning Board.

EMPLOYMENT

While there are many factors that influence where people decide to live, work opportunities undoubtedly rank near the top. Family, community, and property often exert pressures on a person considering a move, but probably the prospects of a better job and a bright future elsewhere are equally influential. Certainly, past decades in Appalachian Pennsylvania coal fields show that once jobs disappear so do many people who seek employment elsewhere.

New jobs do not necessarily produce new residents (as some employers in the Saint Marys area might wish because many of their workers are commuting long distances) nor does unemployment cause people to move immediately. Yet, the general relationship is clear to all and is part of the motivation of local development officials to create new jobs in the North Central District.

With 10,000 jobless in the District in 1960, the unemployment rate was 10.7 percent of the work force. In 1963, the rate was 11 percent, a high from which it has since declined. However, when the rate dropped to 5.7 percent of the work force in 1965, employment had hardly increased. Instead, the labor force had decreased by about 4,400.

Of this 4,400, undoubtedly some workers gave up looking for new jobs while others were among the 14,800 who migrated from the District between 1960 and 1965 seeking better jobs.

Even more important than this total decline in the labor force was the shifting nature of employment opportunities in the District. Manufacturing employment, as the economic activity area descriptions emphasized, is growing in importance; during the 1960-65 period it increased by 1,800 jobs throughout the District. At the same time, non-manufacturing employment declined in agriculture, mining, and self-employed groups. Mining was the biggest loser with a 1,300 drop. Brick and clay refractories declined another 900, and farming dropped 400.

All three of these industry groups are almost exclusively employers of men while many of the new jobs in the electrical industry and elsewhere employ women. Consequently, part of the District's large 1960-65 migration may be explained by these internal employment shifts in which female employment replaced male employment and caused men to take their families out of the District in the search for work.

Still another kind of shift occurred within each of the District's counties. While there was slight employment growth between 1960 and 1965 for the District, two counties - Jefferson and Bradford - lost in total employment. And to make matters even more complicated, three counties - Clearfield, Jefferson, and Bradford - lost jobs in the all-important manufacturing sector as well.

Not only were these internal changes occurring during the 1960-65 period, but the North Central District's employment in relation to other sections of the State was changing as well. In that five years, the District's agricultural and wage and salary employment grew by only 2.9 percent while the Statewide average growth was 7.2 percent.

TABLE 69

NORTH CENTRAL DISTRICT INDUSTRIES EMPLOYING 2,000 OR MORE IN 1965

Industry Group	1965 Employment	State Growth Characteristic 1960-1965	District Growth Relative to the State
Trade	10,400	rapid growth	below average
Electrical Machinery	9,800	slow growth	above average
Services	8,200	rapid growth	below average
Government	7,700	rapid growth	below average
Transportation, Communications, Public Utilities	5,400	declining	above average
Mining	4,300	declining	above average
Stone, Clay & Glass	4,100	declining	below average
Agriculture	3,200	declining	average
Construction	2,800	rapid growth	above average
Fabricated Metals	2,300	declining	above average
Apparel	2,000	rapid growth	above average

Source: Pennsylvania State Planning Board.

TABLE 70

NORTH CENTRAL LOCAL DEVELOPMENT DISTRICT EMPLOYMENT (IN THOUSANDS)

Industry Group	1960	1965	1975
Agriculture	3.6	3.2	2.3
Mining	5.6	4.3	3.1
Contract Construction	2.1	2.8	3.5
Transportation, Communications, Public Utilities	5.5	5.4	5.9
Trade	10.3	10.4	12.5
Finance, Insurance, Real Estate	1.6	1.6	1.6
Services	7.5	8.2	9.8
Civilian Government	7.1	7.7	9.5
Manufacturing	28.2	30.0	35.8
Food Products	0.9	0.9	0.9
Tobacco	0.4	0.7	0.6
Textiles	0.4	0.4	0.5
Apparel	1.7	2.0	2.0
Paper	1.5	1.4	1.5
Printing and Publishing	0.7	0.6	0.6
Chemicals	0.5	0.5	0.6
Petroleum	0.7	0.6	0.7
Rubber and Plastics	0.2	*	*
Leather	0.9	1.0	1.2
Lumber, Wood, Furniture	1.5	1.6	1.5
Stone, Clay, Glass	5.0	4.1	4.8
Primary Metals	1.0	1.8	2.8
Fabricated Metals	1.8	2.3	2.8
Non-electrical Machinery	1.1	1.1	1.6
Electrical Machinery	9.0	9.8	12.2
Transportation Equipment	*	0.1	*
Instruments	0.5	0.6	0.7
Miscellaneous Manufacturing	0.4	0.5	0.8
Sub-Total Agriculture and Wage and Salary	71.5	73.6	84.0
Self-employed	11.8	10.2	8.2
Total	83.3	83.8	92.2
Unemployed	10.0	5.1	3.3**

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*Fewer than 50 employees.

**3.5% unemployment rate assumed as point at which out-migration begins.

Source: Pennsylvania Department of Labor and Industry, Bureau of Employment Security; Pennsylvania Department of Internal Affairs; Pennsylvania State Planning Board.

If District employment had grown at the State rate, employment would have increased by 5,150 jobs. Instead, there was but a 2,100 gain which resulted in a net downward shift of 3,050 jobs. This poor performance is explained by two factors:

*92 percent of the total downward shift resulted from the District's unfavorable industrial mix; and

*8 percent resulted from the District's inability to compete for new jobs as well as the State average.

The unfavorable industrial mix indicates that the District has large concentrations of employment in industries whose growth is less than the all-industry average for the State. Those contributing most significantly to this poor mix are:

Industry	Employment Change Attributed to Unfavorable Industrial Mix
Mining	- 1,780
Transportation, Communications, Public Utilities	- 690
Agriculture	- 660
Stone, Clay, Glass	- 610
Electrical Machinery	- 580

At the same time, the District has concentrations in some greater than average growth industries which partially offset these losses. Among those industries contributing a favorable mix effect are:

Industry	Employment Change Attributed to Favorable Industrial Mix
Civilian Government	+ 690
Retail and Wholesale Trade	+ 680
Services	+ 500

Inherent in the concept of industrial mix is the idea that locally an industry can be expected to grow as fast as in a larger geographic area - in this case the State. Thus, simply because jobs exist locally in certain industries, new jobs should be created at the rates those industries are expected to grow.

A district can try to overcome its unfavorable industrial mix by securing greater shares of new employment than might naturally be expected. Yet, in the North Central District this competitive effect during the 1960-65 period was also negative, although the -240 relative shift hardly deserves comparison with the -2,810 shift attributed to industrial mix. Indeed, the large relative losses in some industries were almost totally offset by equally large relative gains in others. The industries with the largest changes resulting from competitive effect were:

Industry	Employment Change Attributed to Competitive Effect
Trade	- 1,320
Stone, Clay, Glass	- 650
Government	- 600
Services	- 340

Industry	Employment Change Attributed to Competitive Effect
Primary Metals	+ 770
Electrical Machinery	+ 730
Fabricated Metals	+ 580
Construction	+ 510
Tobacco Products	+ 380

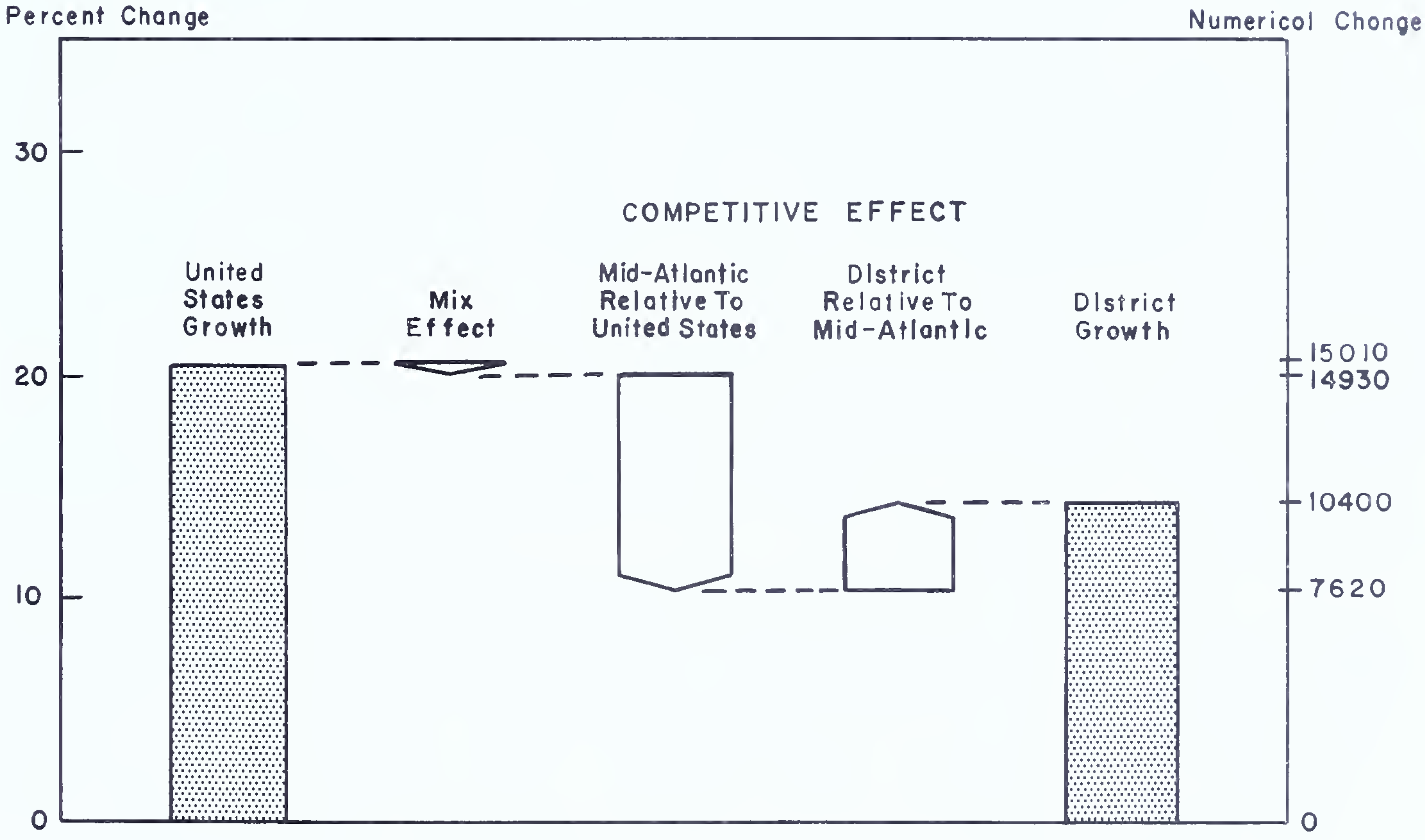
The total of mix effect and competitive effect is the net relative change - the -3,050 shift experienced by the District relative to the State in the first five years of the sixties. Mining and stone, clay, and glass contributed downward shifts equal to 97 percent of the total. To be sure, there were many other industries in which the District experienced downward shifts, but as often there were upward shifts to compensate for those changes. Hence, as long as the District has concentrations of jobs in mining and stone, clay, and glass and these industries continue to reduce employment, its leaders will have to work doubly hard to create new jobs to compensate for those losses.

In essence, the District is experiencing a transition from a natural resources oriented economy to one of product manufacturing. Agriculture, mining, petroleum, stone, clay, and glass, and forest based industries have had employment decreases while the opposite has been true for electrical and non-electrical machinery, metals, apparel, and instruments. During the 1965-75 period, many of these trends may continue.

Employment in manufacturing industries may increase by 18 percent during the 1965-75 decade, which is considerably better than the District has done at any other time in the recent past. And growth in several non-manufacturing industries - trade, services, and government - is expected to accelerate while agriculture and mining are likely to continue declining in employment.

Some of these changes reflect expectations in the national economy as well as local conditions. Therefore, it is useful to compare the District's possible performance during this decade with the entire Nation to find out what influences national economic forces will exert locally.

CHART 17
COMPONENTS OF EMPLOYMENT CHANGE
NORTH CENTRAL DISTRICT
1965 TO 1975



Source: Pennsylvania State Planning Board

The major finding that emerges is that if the District were to grow at national rates, total agricultural and wage and salary employment might increase by 15,010 instead of the 10,400 which is estimated. Thus, the District may experience a 4,610 downward employment shift relative to the Nation.

The second point of significance is that 98 percent of this relative loss is attributed to the District's inability to compete with other sections of the Nation for new jobs. The North Central District's industries generally are expected to grow more slowly or decline more rapidly than elsewhere in the Nation.

Much of the reason for the District's poor competitive position is to be found in the fact that it is part of the Middle Atlantic States, a region which may compete even less well than the District. If, for example, the District were to compete only as well with the rest of the Nation as the Middle Atlantic States region, the North Central District might experience a downward relative shift of -7,310 jobs instead of -4,530 actually estimated.

(It may be useful to point out that the Middle Atlantic States region is expected to grow 14.6 percent during the 1965-75 period which is slightly faster than the 14.1 percent expected in the North Central District. But the large Mid-Atlantic States increases are not expected in industries of importance in the North Central District.)

The District's competitive advantages over the Middle Atlantic States region are expected to be significant in the following industries:

Industry	Employment Change Attributed to Competitive Advantage
Trade	+ 1,670
Primary Metals	+ 560

Industry	Employment Change Attributed to Competitive Advantage
Non-electrical Machinery	+ 420
Lumber, Wood, Furniture	+ 410
Transportation, Communications, Public Utilities	+ 380
Stone, Clay, Glass	+ 350
Agriculture	+ 320

By contrast, the District is not expected to compete effectively with the Middle Atlantic States region and will therefore experience significant downward shifts in the following industries:

Industry	Employment Change Attributed to Competitive Disadvantage
Government	- 1,460
Services	- 530
Electrical Machinery	- 500
Finance, Insurance, Real Estate	- 240

The industrial mix of the District is expected to be in better balance over the 1965-75 period in comparison with the Nation than was true during the 1960-65 period when the District's performance was compared with Pennsylvania. To be sure, there still may be large concentrations of jobs in industries expected to grow below the national all-industry average. Among these are:

Industry	Employment Change Attributed to Unfavorable Industrial Mix
Agriculture	- 1,710
Mining	- 1,670
Transportation, Communications, Public Utilities	- 700
Trade	- 640
Stone, Clay, Glass	- 460
Primary Metals	- 330

The District's industrial mix would be extremely unfavorable were it no for large concentrations of jobs in rapid growth industries such as:

Industry	Employment Change Attributed to Favorable Industrial Mix
Electrical Machinery	+ 3,140
Government	+ 2,140
Services	+ 1,030

In a somewhat different light, the North Central District's performance can be viewed industry by industry to determine the performance relative to either the Middle Atlantic States region or the United States. Three out of the four largest industries in the District may have rapid growth nationally but not locally.

In the case of electrical machinery, which includes the carbon and graphite production of the North Central District, there seems to be no good reason for accepting less than average performance. The District already has considerable specialization which in any growth industry should promise continued employment expansion. There should be a more detailed study to find out how the District can achieve greater growth than is now expected.

TABLE 71

NORTH CENTRAL DISTRICT INDUSTRIES EMPLOYING 2,000 OR MORE IN 1975

Industry Group	1975 Employment	National Growth Characteristics (1965-1975)	District Performance Expectation 1965-75 relative to: Mid-Atlantic	United States
Trade	12,500	slow growth	above average	above average
Electrical Machinery	12,200	rapid growth	below average	below average
Services	9,800	rapid growth	below average	below average
Government	9,500	rapid growth	below average	below average
Transportation, Communications, Public Utilities	5,900	slow growth	above average	above average
Stone, Clay, Glass	4,800	slow growth	above average	above average
Construction	3,500	rapid growth	above average	below average
Mining	3,100	declining	above average	below average
Fabricated Metals	2,800	rapid growth	above average	below average
Primary Metals	2,300	slow growth	above average	above average
Agriculture	2,300	declining	above average	above average
Apparel	2,000	slow growth	above average	below average
Lumber, Wood, Furniture	2,000	slow growth	above average	above average

Source: Pennsylvania State Planning Board.

In the sintered metal (primary metals) industry, District performance is by contrast expected to be much better. More detailed study would be desirable here since the growth expectations here are being compared to those in the ferrous and non-ferrous industries. Whatever the results of such an investigation, it is plain that this is another part of the North Central District's specialization which demands emphasis in future development strategy.

That development strategy is, of course, concerned with the quality of jobs as well as the number. In this respect, the District's manufacturing jobs are concentrated in the medium and low wage categories, a situation not expected to change greatly during the 1965-75 period.

TABLE 72

DISTRIBUTION OF MANUFACTURING INDUSTRY WAGE SCALES (PERCENT)

	North Central District			Pennsylvania	
	1960	1965	1975	1965	1975
High Wage	8.5	10.3	10.1	27.3	26.8
Medium Wage	72.7	69.0	70.1	46.9	49.8
Low Wage	18.8	20.7	19.8	25.8	23.4

Source: Pennsylvania State Planning Board.

Part of the reason for this concentration is that 36 percent of the District's manufacturing jobs are held by women and typically industries employing women have relatively low wage scales. The proportion of women employed in factories in both the State and the Nation was about 28 percent in 1965. District officials therefore may wish to emphasize male employing factory jobs in their development strategy.

DEVELOPMENT PROBLEMS

The District's development strategy is being directed at overcoming deficiencies which inhibit rapid development. Among those cited by local officials are:

a) Lack of highly developed governmental services and development organizations needed to support economic development programs;

b) Insufficient urban services to provide for population movement of people to the District's growing manufacturing centers, including the lack of water, sewer, recreation, and related facilities;

c) Insufficient site improvements on land intended for industrial development; and

d) Absence of a good highway network, especially the lack of a modern north-south highway to replace U. S. 119 and U. S. 219.

These deficiencies are thought to be obstacles to achieving some of the District's more general goals such as full employment, high levels of income, high levels of educational attainment, adequate health care, and the ultimate elimination of poverty. While such goals may not be completely achievable within the limits of economic development programs, the District's strategy can be seen as part of the effort to achieve these laudable social objectives.

As with other Districts, local resources are limited and must be used judiciously. Here, as elsewhere, the most valuable local resource is undoubtedly the District's people.

MANPOWER

The District has not always been able to use its human potential productively, as the high unemployment rates during the fifties and early sixties indicate, but as Federal and State programs have developed, more attention has been given locally for training workers so they can become productive. Thus, Federal manpower development and training programs since 1962 have graduated 354 students as electronics technicians, general machine operators, bakers apprentices, punch press operators, or similar workers in Elk, Clearfield, and McKean Counties.

On a more sustained and longer range basis, vocational-technical schools are being established so that high school graduates may have skills when they enter the labor force. In two approved attendance areas, schools are now under construction. In the Jefferson County-DuBois area, a $4.8 million school with a 640 pupil capacity is expected to open in September, 1969, while in an attendance area around Clearfield a second school costing $3.0 million with a 600 pupil capacity is under construction. It, too, is expected to open in September, 1969. Attendance areas have been approved by the Department of Public Instruction for two other areas in the District - Elk-Cameron and McKean Counties.

The District's privately operated training facilities are limited to a business college in DuBois with about 140 students and two nursing programs - at the Clearfield Hospital (95 students) and at the Bradford Area Hospital (17).

The District lacks either a four-year State college or private college, but in recent years several institutions have helped to overcome this deficiency. By 1967, there were three branches of universities with a combined enrollment of 1,222. The DuBois Branch of The Pennsylvania State University had 422 students; the Bradford Branch Campus of the University of Pittsburgh had 500; and the Punxsutawney Branch Campus of Indiana University of Pennsylvania had 300.

In both Punxsutawney and Bradford, expansion of these university facilities was cited by local officials as the highest priority need.

In Elk County, officials of one of the leading employers in Saint Marys decided to locate their research laboratories elsewhere because of the difficulty of holding talented workers who lack a place to continue their educations while they work. Consequently, the absence of more higher education facilities in the District must be considered a handicap to economic development.

NATURAL RESOURCES

For a district as generously endowed with natural resources as is the North Central District, there is irony that the presence of raw materials is daily becoming less important than the skills that use and refine them. Coal, oil, gas, clay, peat, and timber - all found in generous proportion will return to their owners substantial incomes but within today's economic limitations promise little employment to the District's work force.

Instead, the District's natural resources can be viewed as potential ingredients for new industries in much the same way that the presence of petroleum coke in Bradford County, natural gas in Elk, Clearfield, and Jefferson Counties, and an abundant labor force were instrumental in creating the District's carbon business 70 years ago. Thus, the intrinsic value of natural resources today derives less from the value of production than from using them to attract users to the District.

The District's energy resources have historically been impressive and remain so today. Oil wells in Bradford, Potter, Elk, and Jefferson Counties accounted for 55 percent of the 4.8 million barrels of petroleum produced in Pennsylvania in 1966. Bradford County accounted for all but one percent of this amount and continued as the State's most important producer, although both the amount of production and the number of wells is declining. The 1937 peak of 16.4 million barrels of production has steadily declined to 2.6 million barrels in 1966 and is expected to decline further until about 1980 when the existing recoverable reserves probably will be exhausted.

The District's counties also produce over half of the State's natural gas from deep sands. Four different fields in Cameron, Elk, Clearfield, and Jefferson Counties produced an estimated 16.6 million cubic feet of gas in 1967, and in Jefferson 19 new deep wells were drilled in that year to tap the Elk Run gas field.

With 11 percent of the estimated bituminous coal reserves in Pennsylvania, Clearfield, Jefferson, and Elk Counties - the District's three coal producers - mine the same proportion of the State's bituminous coal. Clearfield's 7.2 million tons in 1966 accounted for about three-quarters of the District production and Jefferson County produced another 18 percent of the total.

Three quarters of the total comes from strip mines which have grown in importance since the forties. This mining method results in greater production with fewer workers and a lower cost per ton for mining. In addition, it has encouraged the mining of high quality coals in the District in beds only about two feet thick.

Production in recent years has been close to record high years of the past because the District's coal fields are close to electric generating plants which have become major bituminous coal consumers. And in the future, production is expected to increase. But as the District's experience between 1954 and 1966 illustrates, tonnage may increase as the number of jobs declines. During that period, coal tonnage from the District increased 36 percent while employment simultaneously dropped 40 percent.

Moreover, coal mining has left damaging traces in North Central

Pennsylvania as in other sections of Appalachia. In 1966, Clearfield County not only led other counties in the amount of coal produced from strip mines, but it also had 97 strip mine companies - the largest number of any county. About seven percent of the County's land area is devoted to resource production and extraction, and over half of this is land disrupted by strip mining and in need of reclamation. In all, the District has in excess of 35,000 acres of land in need of reclamation. This is 18 percent of the bituminous mine total in the State.

The other damaging effect of mining has been the pollution of the District's streams by mine acid. Discharges into the District's streams are estimated to be 62.8 million gallons of mine acid daily. The East Branch of the Clarion River, the West Branch of the Susquehanna River, Sinnemahoning, Toby, and Clearfield Creeks, and virtually all of the major streams in the southern half of Jefferson County suffer from some degree of acid impregnation. In the Pennsylvania State Water Resources Supplement, two projects of importance to the North Central District were recommended: Clarion River Basin Mine Drainage Abatement - a project to reclaim strip mine areas, seal and grout mines, and treat water - with an estimated cost of $60 million; and Upper West Branch Susquehanna River Mine Drainage Abatement - a $7.7 million project calling for backfilling and reclamation of strip mine areas, mine sealing and grouting, drainage flow control, diversion channels, and treatment. The importance of such projects is reinforced by the high priority of mine restoration given by local officials.

The refractory clays of Clearfield County place it second in total production of clay among the State's counties. Six refractories and one brick and structural tile plant in the County use the flint and plastic fire clays which occur in abundance beneath the various coal seams in the County. While the jobs in refractories declined fifty percent between 1959 and 1966, the potential of this resource lies less in existing, known uses than in its potential. The most likely new development will be in the extraction of alumina from diaspor clays found in Clearfield County. Already the U. S. Bureau of Mines has conducted detailed laboratory and pilot plant tests which show that about nine-tenths of the alumina can be extracted by one process, yet the commercial production of aluminum by this process has not yet been undertaken.

The District's clays often are mined by open pit operations in the same manner as coal, and as with coal mining, much land has been left disturbed. No estimate of the amount of land disturbed by clay mining is available because this form of mining only recently has been subject to regulation. Now clay strip miners are required to restore land just as are coal strippers.

Other resource deposits in the District include peat in Potter County, extensive salt deposits in several counties, and sand, gravel, and stone.

TABLE 73

1966 VALUE OF MINERAL PRODUCTION IN THE NORTH CENTRAL DISTRICT

County	Value	*Minerals Produced in Order of Value
Cameron	$ -	-
Clearfield	29,232,088	Coal, clay, sand and gravel
Elk	withheld	Coal, stone
Jefferson	withheld	Coal, clay, stone, sand & gravel
McKean	407,675	Clay, stone
Potter	withheld	Stone
Total	$55,348,000	

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*Excludes value of natural gas, natural gasoline, LP gases, petroleum, and gem stones.
Source: Pennsylvania Bureau of Topographic and Geologic Survey.

In a District with 86 percent of its land in commercial forests, timber resources should be a major attraction to new industries. Already an estimated 145 sawmills are scattered throughout the six counties, and one in ten manufacturing jobs is in forest related industries.

The forests themselves are widespread. Jefferson County, with three-quarters of its land in commercial forests, has the smallest proportion of any District county, while McKean, Elk, and Cameron all have in excess of 90 percent of their land covered by forests.

The Allegheny National Forest covers 237,000 acres of western McKean and Elk Counties and illustrates the potential of the second growth forests maturing in the District. Through intelligent management, timber production in the National Forest increased 275 percent in the 1957-66 decade and put it ahead of all other national forests in the average prices paid by lumbermen. In part, this high return derives from the presence of high value species such as black cherry, sugar maple, and white ash.

The District's counties produced 15 percent of the State's sawtimber in 1964 and 27 percent of the poletimber in that year. Over the 1954-64 decade, sawtimber cutting increased as did poletimber. The District's total forest reserves are continuing to increase, but at a slower rate in recent years. That is, the 1954 increase of 91.6 million board feet over the amount cut and lost through natural causes dropped to 54.3 million board feet in 1964. Similarly, the 656,783 cord increase in poletimber in 1954 dropped to a 595,878 cord increase in 1964.

New manufacturing employment in forest related industries is coming to the District slowly. During the 1957-65 period for example, only three new industries with 161 employees were brought in.

With 11 percent of the State's land, the North Central District accounts for but 2.3 percent of the agricultural receipts. This small proportion is to be expected since only 5 percent of the District's land area is in harvested crop land.

Of the $19 million paid to District farmers in 1965, 49 percent was paid for dairy products, 11 percent for poultry products and 12 percent for potatoes and vegetables. Of the total, Potter County farmers received a third, Jefferson County farmers a quarter, and Clearfield a fifth. None of the Counties excels in any farming specialty although Potter ranks fifth in production of maple products and Jefferson is fifth in Christmas trees.

Agriculture here as in other local development districts of Pennsylvania is still undergoing the change from small farms into larger units employing fewer people. The Pennsylvania Crop Reporting Service has stated that between 1965 and 1967 the District's farms declined from 3,365 to 3,070. In the earlier year, the total number of people employed in agriculture, forestry, and fisheries in the District was estimated to be only 3,200, less than four percent of those at work in the District.

Because soils are generally poor, the growing season short, and the terrain forbidding, the outlook for farming is likely to be continued consolidation into a small number of highly efficient farm units.

PUBLIC FACILITIES

Publicly sponsored services, facilities, and programs are the third important ingredient that development leaders have to offer prospective business enterprises. This community infrastructure has become easily as important to industrial development efforts as natural resources and manpower have been in the past. Accordingly, through a questionnaire the District leaders determined ten priority programs considered most important for development in the North Central District.

HIGHWAYS is the first priority program. This emphasis derives directly from the first goal of development district officials - "Prepare and push for a structure of highways that will not only inter-connect the sub-areas in the District but will open these sub-areas and the District to the markets and people outside the District."

In today's expanding system of high speed highways, the District is unusual in that it is scheduled to have only one limited access highway - I-80 - built. It will cross Jefferson and Clearfield Counties connecting them with Cleveland and New York. No Appalachian Development Highway is proposed for the District nor does the five year plan of the State Highway Commission propose construction of a north-south highway.

Given these circumstances, reconstruction of U. S. 219 to a four-lane, limited-access standard throughout its 100 mile length in the District is cited as the top priority highway need.

Secondly, the District calls for development of a highway plan to connect the economic activity centers so that greater benefit of widespread talent, services, and resources can be achieved.

Already several important improvements are scheduled in the 1967-73 State Highway Commission's Program. By-passes around Bradford, Ridgway, and DuBois on U. S. 219 are scheduled as are other by-passes around Punxsutawney, Clearfield, and Philipsburg. And improvements of highways from Bradford and Kane into the Allegheny National Forest are now under construction.

Access roads to industrial sites and recreation areas also have been cited by the District's leaders. Among those proposed are roads to industrial sites near Bradford, Brookville, Punxsutawney, DuBois-Jefferson Airport, DuBois, Wolf Lick Interchange (I-80), Philipsburg, and Ridgway-Saint Marys-Johnsonburg. Three access roads are proposed as well for recreation areas - to the Curwensville State Park, to the East Branch Reservoir at Elk State Park, and to the proposed Otocsin Recreation Area between Clearfield and DuBois.

SEWER AND WATER SUPPLY improvements are the District's second priority Six of the eight industrial sites needing access roads are also in need of sewer and water facilities if they are to be competitive with industrial sites in other parts of the State and Nation. The six in need of these facilities are near Bradford, Brookville, DuBois, Wolf Lick Interchange, Philipsburg and betwee Ridgway-Saint Marys-Johnsonburg. Sewer and water facilities will also be needed at the proposed Otocsin Recreation Area.

In three District economic activity centers, expansion of sewer and water facilities to outlying areas has also been cited. Bradford, Ridgway, and Punxsutawney are these communities.

Other communities are in need of improvements to either their water system or sewage collection and treatment systems. Those in need of improved public water supplies are Saint Marys, where a new impoundment, new treatment system, and new water lines are needed for industrial expansion and will cost \$4.5 million; Johnsonburg, where a new impoundment and improved water lines will cost \$1.7 million; and Curwensville, where extension of the community supply 2½ miles into an adjoining township will cost \$170,000.

Six communities need either construction or enlargement of sewage treatment plants - Coudersport, Johnsonburg, Falls Creek, Sykesville, Bradford, and Clearfield. Sewer line extensions are needed in Saint Marys, Emporium, and DuBois, while storm sewers are needed in Curwensville.

RECREATION AND TOURISM are the third priority program in the North Central District. The District's eleven State Parks attracted 1,247,000 visitors in 1967 and the Allegheny National Forest had 1,335,000 visitors in the same year. Thus, the recreation industry brings in considerable money to the North Central District in an amount yet to be measured. Even so, improvements to existing facilities and construction of new parks is seen as important to continued economic development.

The major recreation improvement needed (aside from the access roads already cited) is development of the Otocsin Recreation Area at the S. B. Elliot interchange of I-80, the Keystone Shortway. This joint public and private undertaking, according to a plan developed and administered by the Pennsylvania Department of Forests and Waters, is to include a new 1,400-acre lake, a resort lodge, a rural shopping center, golf course, art center, wildlife park, honeymoon retreat, narrow gauge railroad, ski lodge and slopes, pioneer village, and wilderness area. Most of these facilities are to be constructed on a franchise basis by private business while public money will develop water, sewer, and road facilities.

HOUSING is the fourth priority program in the District. An important environmental objective of local development leaders in the North Central District is the provision of adequate housing for all its citizens.

The proportion of housing units in 1966 with all plumbing fixtures was only 65 percent in the District - 79 percent in the State as a whole. The proportion in sound condition was 73 percent - 84 percent for the State. New construction has lagged in the District as well. Only 14 percent of the units in the District were constructed in the fifties - 19 percent for the State.

Thus, when local leaders and business executives cite poor housing as one obstacle to getting and holding talented workers, there is statistical evidence to support them.

On the other hand, the District's housing market in 1960 was soft - that is, the proportion of vacant units was high in many counties and therefore acted to discourage private investors. Eleven percent of the District's units were vacant - 6.5 percent in the State as a whole. In Cameron County's principal community, Emporium, the vacancy rate was 9.2 percent. In Elk County, the vacancy rate was 12.1 percent, yet in the County's principal communities, the vacancy rates were low - in Saint Marys 2.8 percent, Johnsonburg 2.6 percent, and Ridgway 4.6 percent. Thus, at least in Elk County, the high vacancy rate probably derived from abandonment of homes in outlying areas accompanied by a movement to these manufacturing centers.

If these low vacancy rates in the urban centers still prevail, the housing market is extremely limited since housing economists suggest that vacancies of at least three percent are necessary for normal turnover.

SHOPPING facilities are the fifth District priority. Some economic statistics disclose what is apparent to local residents, especially housewives - that shopping facilities by comparison with other areas are limited. The low proportion of service employment in Cameron County suggested that fact as did the small amount of personal income derived from service employment elsewhere in the District.

Shopping center development is almost exclusively handled by private business although certain public actions can be an important stimulus. None is equal to construction of new highway facilities which give quick access to new shopping areas, and in this respect construction of by-pass routes around several of the District's largest activity centers may prompt new development. Another governmental action which has been helpful in many communities is urban renewal - a program through which old buildings are replaced by new ones. Bradford is the only North Central District community that has undertaken urban renewal. It has three projects, one of which - the Commercial Center - will reclaim six acres of downtown land as part of an effort to improve shopping facilities.

PUBLIC HOUSING is the sixth priority program in the District and is intended to meet the needs of families who cannot obtain decent housing in the private housing market. It is also an important source of relocation housing for families displaced by urban renewal and other public works programs. In Bradford, local officials indicate a need for such relocation housing.

Elsewhere, both low income families and elderly families are in need of improved housing. In Curwensville, 80 units of public housing are proposed for elderly families at a cost of $1.6 million while in Johnsonburg 120 units - half for low income families and half for elderly families - are proposed at a cost of $2.4 million. And the lack of such housing in the DuBois-northern Jefferson County area has been cited as a major problem.

VOCATIONAL-TECHNICAL SCHOOL construction is the seventh District priority. These facilities were discussed above under manpower development programs. Only in Jefferson and Clearfield Counties have local authorities started construction. Schools also should be built in McKean County and in Cameron-Elk Counties.

HOSPITALS are the eighth program priority. There are 12 general hospitals in five of the six counties of the District with 1,335 beds. Cameron County is currently served by the Saint Marys hospital 20 miles to the west of Emporium.

District officials have proposed construction of a small medical center in Emporium to overcome Cameron County's deficiency. Other proposals include construction of a mental health center to serve Clearfield and Jefferson Counties, phase three of the Clearfield Hospital's rehabilitation and expansion program at a cost of $2 million, and expansion of the Elk County general hospital in Ridgway at a cost of $225,000.

AIRPORT improvements are the ninth District priority. Of the 18 airports in the District, six are publicly owned and two of these - the Bradford-McKean County and the DuBois-Jefferson County - have regularly scheduled flights.

Four airport improvements have been advanced by local officials. These include general enlargement of the facilities at the Bradford-McKean County Airport to handle jet aircraft, construction of an airstrip at Quehanna to augment facilities available to a light plane manufacturer, construction of an airstrip near the Wolf Lick Interchange east of Clearfield on I-80 to accommodate executive aircraft in this growing area, and construction of an airport in Potter County.

HIGHER EDUCATION is the tenth District priority program and was discussed above in connection with manpower development. A classroom building has been proposed for construction at the Bradford Campus of the University of Pittsburgh.

NEW DEVELOPMENT AREAS

The North Central District's leaders point to three areas with considerable economic potential that are not the normal economic activity centers and areas. The Quehanna industrial complex has been described as an area of unique employment potential although now it is not a residential area as well. In addition, the area around the Bradford-McKean County Airport, which is about midway between Bradford and Kane, is expected to be the location of new industries if not new residential development. And a new town has been proposed near the DuBois-Jefferson County Airport and I-80. If undertaken, these new development areas would become economic generators of considerable importance.

DEVELOPMENT STRATEGY

The North Central District's leaders have settled upon a concise strategy for economic and social improvement. The District organization is developing a plan for highways to improve access; it is aiding activity centers in identifying needs for improving housing, shopping, recreation, vocational-technical schools, colleges, water, sewers, and other utility services; it is helping communities to qualify for Federal and State assistance in these and other programs such as industrial development and tourism; and it is initiating planning and research efforts to investigate the supposed new development areas.

PENNSYLVANIA PLANNING AND DEVELOPMENT POLICIES FOR APPALACHIA

Early in this Plan report, regional planning for community and economic development was referred to as a bridge between local and State officials; as such, it serves the objectives of both interests. The Appalachian Regional Commission, seeing the great value of regional planning and action to its responsibility for economic and social development, has encouraged and promoted these activities at every opportunity. The Commission has helped the states to establish multiple county units - local development districts - and to provide staff assistance so that local people could identify their problems, formulate their own goals, and embark on programs for improvements.

There is a long history of county and regional planning in Pennsylvania, much of it funded by the Federal government through the Department of Housing and Urban Development, but those efforts differ in one important aspect from the work being done by the local development districts. While county and regional planning agencies emphasize community development, the local development districts combine community development and economic development.

In the preparation of this Plan, the State Planning Board staff depended upon the work of the local development districts. A general set of guidelines was agreed upon which each local development district followed in analyzing existing conditions, identifying deficiencies, proposing a development strategy, recommending projects, and specifying priorities of need. As the preceding seven chapters illustrate, conditions, problems, and needs - as identified by these local officials - vary widely just as do their proposals for action. Only through effort which involves local people could so many of these important facts be learned and put into the unique local perspective they deserve.

The responsibility of the Local Development Districts was to develop a systematic approach for solving their development problems, but once the efforts of these seven districts were assembled, more work was necessary to prepare the Pennsylvania Appalachian Development Plan. The State has the responsibility of making similar judgments, of surveying conditions reported by localities, of evaluating strategies proposed, and of determining where State efforts should be focused. This task is simple neither for localities nor for State government.

In addition to the job of bringing together in a coherent program the needs, objectives, and strategies of the several districts, the State agencies responsible for the Appalachian projects have to understand the goals, policies, and programs of other State agencies responsible for improvements the localities want.

Thus there is a functional perspective and an area perspective. A line department of State government naturally represents the single purpose point of view while the local development district sees many different functions at once as they impinge on a specific area. They are both important ways of viewing matters, and this Plan must reflect these two perspectives in proposing policies and programs.

The task of preparing this Plan has been the responsibility of the State Planning Board staff, working in cooperation with the Secretary of Commerce - the State Member on the Appalachian Regional Commission. Once the survey and analysis of local conditions and needs was completed by each local development district, the information was analyzed and written by the Board's staff in the district chapters along with State Planning Board employment and population projections. Simultaneously, visits were made to each of the Commonwealth agencies with programs affected by grants available from the Appalachian Regional Commission. From each agency was secured a priority list of areas needing facilities administered by the agency - a list that was compared to cited needs of the localities themselves.

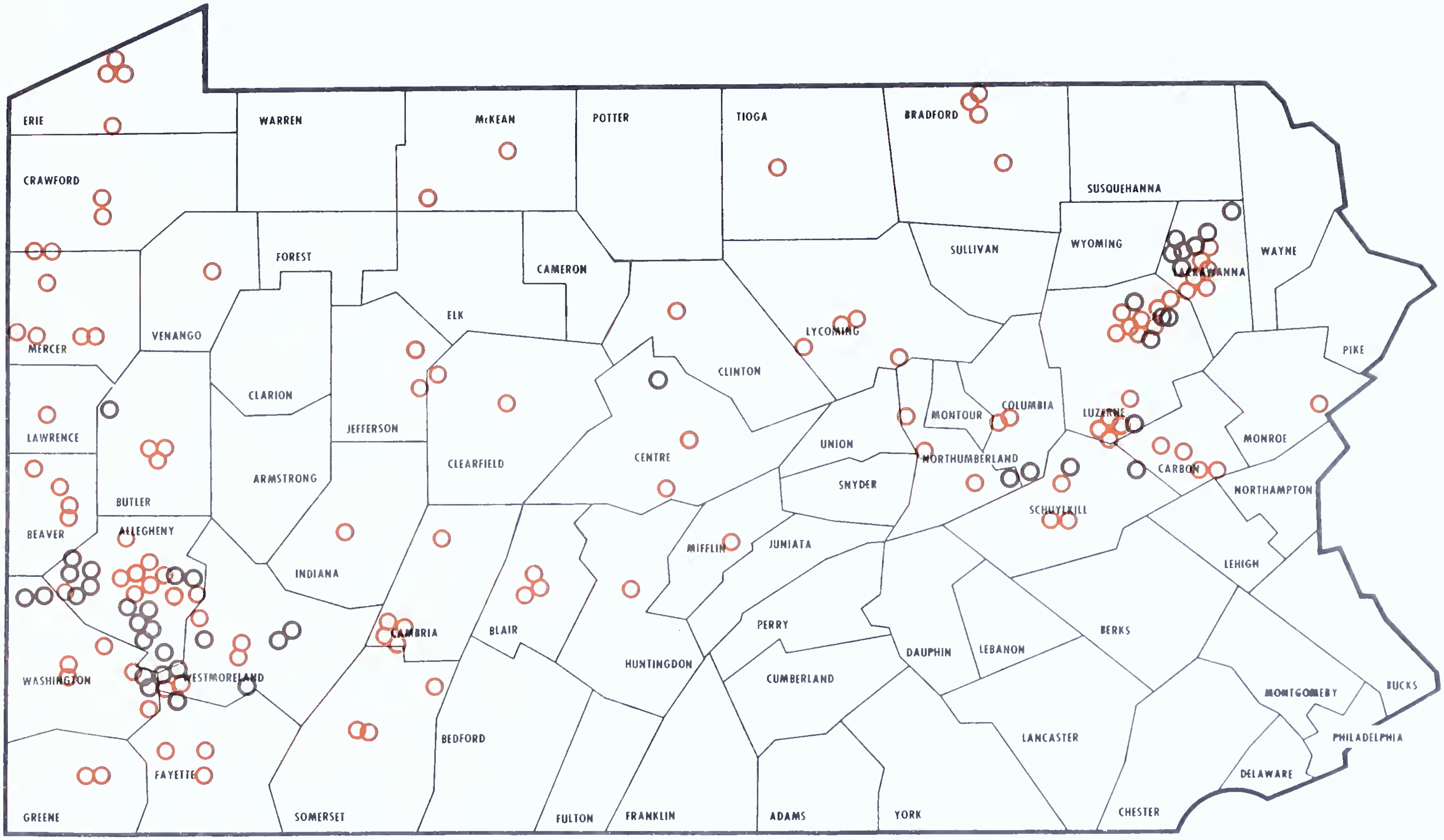
Finally, close attention was paid to the fact that the Appalachian regional development program has clear priorities itself and that the preparation of the Plan was proceeding within that framework. That is, this broad effort was undertaken because of the conviction that systematic economic development efforts have to be based on sound Statewide comprehensive planning.

Planning and analysis phases have not been confined by the limits of the Appalachian Regional Development Act, yet many judgments have been possible because of it. That is, officials of the Appalachian Regional Commission believe the Commission's grants can be most effective if they are made as a part of a state comprehensive planning effort, so they have asked each state to fit Appalachian planning into a State Plan. It is at this point that the economic development objectives of the Appalachian Regional Commission are helpful. By using economic development as the basis for judgment, it becomes possible for the State to decide which of the thousand or so locally proposed projects should be recommended for grants from the Commission.

ECONOMIC DEVELOPMENT POLICIES

The Pennsylvania policy toward economic development is traceable to the Appalachia Pennsylvania experience of the past two decades which was cited at some length in the third chapter. It has two clear thrusts - training workers and attracting manufacturers - and a recently added third broad one with several objectives which might be summed up as "balanced economy."

APPROVED APPALACHIA PROJECTS



○ MINE RESTORATION

○ PROJECTS NOT INCLUDING MINE RESTORATION

PROJECTS RECEIVING FUNDS FROM
THE APPALACHIAN REGIONAL
COMMISSION AS OF MAY 1968

The first two are obvious in their origin. Pennsylvanians - over a quarter of those employed in Appalachia Pennsylvania in 1950 - lost their jobs in mining, railroading, farming, and steel making by 1963. They needed new skills to get new jobs. Their localities needed trained workers to attract new employers, so the Commonwealth embarked on a variety of retraining efforts plus construction of vocational-technical schools to assure that the labor force was prepared for the changing needs of industries.

The effort to attract manufacturers has been as obvious as the need for retraining. Pennsylvania's position as one of the Nation's leading industrial states has been a matter of pride since Revolutionary War days and has contributed greatly to the State's progress. Merchants, workers, public officials, and the general public were all agreed on the value of manufacturing enterprises in a local economy and therefore could act jointly in trying to attract industries to their communities. Underlying this general agreement was one of the tenets of the economic base theory that describes manufacturing as an "export" industry which causes money to flow into an area from outside through the sale of a factory's products. Perhaps even more important than that is the reality known to bankers and merchants - that manufacturing payrolls have a greater multiplier value in a local economy than most other expenditures.

For these many reasons, the Pennsylvania Industrial Development Authority was created in 1956 to help localities in attracting industries. As of May, 1968, 797 projects with a loan value of $164 million had been approved throughout the State. The resulting direct employment is estimated to be 108,000. During this same period, an additional 1,200 firms have been attracted to Pennsylvania.

In the Appalachia Pennsylvania counties, $131 million of the PIDA money has been committed with an estimated 86,600 new jobs created in 640 new and expanded business firms. For the economies of the 46 counties in which this activity has occurred, the improvement of general business conditions has been dramatic; throughout Appalachia Pennsylvania these new jobs have added an estimated $369.6 million in personal income through payrolls.

The Pennsylvania Department of Commerce administers a program which makes available matching funds for industrial development promotion activities. Grants of about $4.3 million have been made to industrial development agencies throughout the State, with about $2.4 million in the Appalachian counties. Under the $500,000 site development program, grants of about $353,000 have been made for projects in Appalachian counties, and grants of about $1 million in a total program of about $1.1 million have been made for community facilities projects in Appalachian counties.

Generally, manufacturing is not expected to experience rapid growth when compared with other industrial sectors. As a result, a locality that has attracted one plant may not enjoy automatic expansion of employment over the years simply because that manufacturing sector is growing slowly throughout the Nation. Non-manufacturing sectors of the economy, on the other hand, generally are experiencing much faster growth than manufacturing.

This is the factor underlying the third thrust of the State's economic development policy, the one termed "balanced economy." While the emphasis of the past has been to encourage new manufacturing jobs, the State has developed an array of programs to spur growth in other industries. Employment in services, for example, is projected to grow rapidly at least until 1975, yet the causes of employment expansion in this sector are far from clear. Therefore, development policies and governmental aids to stimulate service employment are being evolved on a pragmatic basis as in the case of tourist promotion. Department of Commerce matching funds amounting to $1.6 million of the Statewide total of $2.9 million have gone to organizations in Appalachian counties to help advertise and promote local tourist attractions.

Science and research are being actively encouraged through fellowship grants and "seed-type" investments in new research centers associated with the State's colleges and universities. The Pennsylvania Science and Engineering Foundation in the Department of Commerce is concentrating its appropriations on research of what it terms "people problems" - that is, subject areas such as pollution, materials, bio-medical, health, transportation, knowledge availability, physical science, industrial development, and nuclear engineering. Grants of about $625,000 in a total program of $1.4 million have been made in Appalachian counties.

These programs administered by the Pennsylvania Department of Commerce have meant $136.6 million in expenditures by the State in Appalachian counties. Some observers suggest that the most important, but unmeasurable, benefit of all these efforts has been a substantially improved business climate.

The new programs illustrate the break from the past singular concentration on manufacturing employment in industrial development programs.

While most of the State's development funds are still used to aid plant location for manufacturing industries, development policies are being altered to encourage other kinds of enterprises which promise to broaden the economy and to increase the State's growth rate.

APPALACHIA INVESTMENT POLICIES

Following the general policy of trying to attract manufacturing and distribution industries to the State, Appalachian funds are recommended for projects that are industry-related. Where an employment potential with a sizable payroll is possible, strong consideration will be given.

Administrative procedures established by the Department of Commerce require that projects be approved by the operating department of State government responsible for the kind of facility requested. This requirement insures the highest level of coordination between localities making requests and Commonwealth agencies with statutory jurisdiction concerning them.

*Access roads to economic development sites are a high priority project category. Once the potential for economic development is shown, the project is considered on its own merits. The site to be served should be held by a non-profit organization or governmental body to assure that the public's investment will not accrue to speculators. Where an industry is locating or committed and no speculation is involved, the preceding requirements may be waived.

*Vocational-technical schools are also a very high priority project category because they prepare people for employment opportunities. Grants to aid in construction of them are readily made when need is established.

*Airports often receive construction funds if it can be shown that the facility will serve an industrial, distribution, or tourist development complex. Here, demonstration of the effect of the facility on economic development must be shown.

*Mine area reclamation projects fall into three categories when considered for Appalachian funds: elimination of mine fires and subsidence dangers, strip mine and waste pile reclamation, and sealing of abandoned oil and gas wells. Aid for stopping mine fires and subsidence is granted on the basis of need as established by the Department of Mines and Mineral Industries. Those in urban areas are, of course, given higher priorities than those in remote rural areas where there is no danger to communities or inhibition to economic development.

Strip mine reclamation, rehabilitation of land affected by waste piles, and sealing of abandoned oil and gas wells are aided in those cases where the project can be shown to have some economic development benefit. For example, the backfilled land could be used as part of an industrial park, for expansion of an existing industry, or for a tourist development facility.

*Sewage treatment plants are considered in the same light as strip mine reclamation requests: some economic development benefit must be shown. There are numerous requests for aid in construction of treatment plants since many Appalachian Pennsylvania communities need to improve or construct new treatment facilities to curb stream pollution. The financing of many projects is assisted with Federal funds under the Federal Water Pollution Control Act and with State funds from the recent $500 million bond issue under the provisions of the Land and Water Conservation and Reclamation Act. A prerequisite for consideration for financial assistance is that a project be ranked in priority order and be approved by the Sanitary Water Board. Appalachian funds are in lieu of other State and Federal grants. They are used only when a high economic development potential can be demonstrated by the applicant and no other source of funds is available.

Sewer and water line extensions into industrial parks, as a matter of State policy, are not recommended for Appalachian grants. Instead, such extensions receive grants and loans under the Commonwealth's own Site Development Program, Community Facilities Program, PIDA Industrial Park Program, and Federal EDA Program which are administered by the same Department that administers the Appalachian program.

*Higher education facilities - science oriented research, science, engineering, teacher training, and medical personnel training - will be financed with Appalachian funds especially when the new facility is expected to be attractive to industries as in the case of science or engineering buildings. The State Commission on Academic Facilities in the Department of Public Instruction establishes a priority list of projects on which the facility must appear before it is eligible for assistance. As a matter of State policy, community colleges, unless predominantly vocational and technically oriented, are not eligible to receive Appalachian project grants.

*Hospitals receive high priority consideration, especially when there is a nurses' training or vocational rehabilitation program involved or when necessary for the overall economic development of the area. As with other programs, a recommendation from the appropriate Commonwealth agencies is one prerequisite for consideration.

As a matter of State policy, extended care facilities - nursing homes and county homes for the aged - are not considered for Appalachian funds.

*Libraries have been financed in part with Appalachian funds, but to achieve the maximum benefit with limited Appalachian program funds there will be no future financing of libraries.

*Educational television projects are a matter of keen interest although no projects in Pennsylvania have yet been financed with Appalachian funds. As a matter of policy, development of a Statewide educational television network will be supported, and in several areas projects to boost a weak signal will be supported with Appalachian funds.

*Audio-visual educational materials have been financed in the past and will be financed in the future depending on the priority assigned by the Department of Public Instruction and the availability of funds. These funds are available to regional instructional materials centers which are established to serve multi-county districts in Appalachia.

*Timber and forest research is not a program eligible in Pennsylvania for Appalachian funds because there are vigorous programs in this field already in progress in the Department of Commerce, the Department of Forests and Waters, and The Pennsylvania State University.

*Land stabilization, conservation, and erosion control programs will probably be phased out of the Appalachian program in Pennsylvania for the same reason that timber and forest research grants are not to be made: the U. S. Department of Agriculture, in cooperation with the Pennsylvania Department of Agriculture, has a vigorous, well-financed effort underway in which limited Appalachian funds can have little impact.

*Housing improvement is a high priority concern in the administration of Appalachian funds. Appalachian funds are available to help defray expenses incurred in planning and obtaining mortgages under Section 221, as amended, of the National Housing Act. These funds are available as loans or grants to non-profit, limited-dividend, and cooperative organizations, or to public bodies that are sponsors of housing projects. Administration of this portion of the Appalachian program in Pennsylvania is being handled by the Department of Community Affairs in cooperation with the Department of Commerce.

*Water supply projects necessary for economic development are eligible for assistance. Representative of those that are given favorable consideration are projects with a direct industrial development or tourist development impact. Others with a clear economic benefit also will be considered for funding by the Appalachian Program.

Of these many programs, all except mine restoration and access roads are programs under which individual projects must be approved for basic Federal grants before they are eligible for Appalachian funding. As a matter of practice, most of the Federal programs under which these basic grants are made are administered in cooperation with State agencies. Hence, individual project needs are established by functional State agencies prior to submission for Appalachian funding. Once this prerequisite is met, a project is evaluated in light of the criteria listed above.

All projects to be undertaken utilizing Appalachian funds will be subject to further individual evaluation as they receive specific consideration. Consistency with the Development Plan will be a prime factor. The Plan will continue to be reviewed annually and appropriate supplements prepared up-dating its substance and proposed projects.

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

NORTHWEST DISTRICT

Construct vocational-technical school to serve Warren County

Construct mental health facilities at Hamot Hospital, Erie

Construct additional facilities at St. Francis Hospital, New Castle

Construct facilities for Vallonia Industries (Crawford County Sheltered Workshop), Meadville

Construct new airport to serve Clarion County

Construct extension to runway at Meadville airport

Construct laboratory or research center at Clarion State College

Construct science and industry research center in Erie under a consortium of the colleges, universities, and industries in the area

Construct access roads and site development work to serve the new and expanded port and pier facilities in Erie

Construct access roads to serve the Barrett Flats industrial area in Franklin, the Tionesta recreation areas, an industrial and research park in Erie, the New Bethlehem industrial area in Clarion County, and possible projects in Lawrence and Mercer Counties

Construct Section 221 housing in Erie (2 projects), New Castle, and Warren

Improve the water supply for Erie

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

TURNPIKE DISTRICT

Construct extension to Meyersdale Community Hospital

Construct extension to Bedford Memorial Hospital

Construct new airport at Bedford

Construct multipurpose building for the Altoona Campus, The Pennsylvania State University

Undertake strip mine reclamation project at the Bellwood Borough reservoir and watershed area

Construct vocational-technical school to serve northern Cambria County

Construct access roads for Meadowgrounds recreation area in Fulton County and Raystown recreation area in Huntingdon County

Construct Section 221 housing in Altoona and Johnstown

Develop industrial park sites at Tipton, Johnstown, Bedford, Somerset, Broad Top area, and Huntingdon

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

NORTHERN TIER DISTRICT

Construct vocational-technical school, Towanda

Improve Memorial Hospital of Towanda, Towanda

Construct educational television "booster" system to extend reception to areas not now served and to become a part of the proposed Statewide educational television network

Construct sewage treatment facilities, Mansfield

Develop a medical center, Sullivan County

Complete access road and site development (water and sewage facilities) for resort development, Sullivan County

Undertake industrial park development, Sayre-Athens area

Expand audio-visual library at Mansfield State College to provide more and better service to school districts

Construct airport in the Sayre-Athens-Towanda or Tunkhannock areas

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE THREE YEAR PERIOD ENDING JUNE 30, 1971

NORTHEAST DISTRICT

Undertake mine subsidence flushing projects in Scranton City; Oxford, Hill, and Green Ridge sections

Undertake strip mine reclamation project in Wilkes-Barre City; Parsons and Miners Mills sections

Undertake mine fire control project at Pottsville City - Peach Mountain

Undertake strip mine restoration projects at Scranton, Pottsville, and Hazleton

Undertake strip mine restoration at Storrs property in Dickson City to create industrial park area

Acquire additional land at Promoff site in Scranton and develop it as an industrial park

Construct access road and/or site development for Ashland coal mine museum

Construct access road and/or site development for industrial parks in Hazleton, Mahanoy City, Wilkes-Barre, Scranton, Pottsville, Tamaqua, Jim Thorpe, Nesquehoning, and Stroudsburg

Construct access road at Scranton campus of The Pennsylvania State University

Construct access roads to serve new tourist development facilities

Construct educational television "booster" system to extend reception to areas not now served and to become a part of the proposed Statewide educational television network

Construct access road and/or site development at Eckley for the "Molly Maguires" film site

Construct vocational-technical schools in Lackawanna County (2), Luzerne County, and Monroe County

Construct runway extension at Mount Pocono Airport

Construct classroom or science facility at either the Hazleton Campus or Wilkes-Barre Campus of The Pennsylvania State University

Construct academic center (classrooms) at Kings College in Wilkes-Barre

Construct a science and engineering research center for all the colleges, universities, and industries in the Scranton/Wilkes-Barre, Hazleton, Pottsville area

Construct facility for the Institute of Physical Medicine and Rehabilitation (Allied Services for the Handicapped) in Scranton

Improve the Carbondale General Hospital

Construct facility for St. Stanislaus Institute in Nanticoke

Construct Section 221 housing in Scranton (2 sponsors for 2 projects), Wilkes-Barre, East Stroudsburg, and Shenandoah

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

SOUTHWEST DISTRICT

Construct vocational-technical schools in Washington County (2), Westmoreland County (3), Northern Fayette County, Allegheny County Steel Valley, and Beaver County

Construct facility for Mon-Valley United Services, Inc.

Construct vocational-rehabilitation facility for Home for Crippled Children in Pittsburgh

Construct laboratory and classroom building at the Greensburg Campus, University of Pittsburgh

Construct a research center in the Pittsburgh area for transportation, pollution, materials, and new fields of science

Construct runway extension at the Latrobe-Westmoreland Airport

Construct facilities at J. S. Thompson Memorial Airport, Rostraver Township, Westmoreland County

Construct improvements at the Connellsville Airport, Fayette County

Construct access roads and complete site development for industrial parks in Fayette County (2), Greene County, Washington City, Donora, Westmoreland County (2), upper Beaver County, Allegheny County (RIDC and Westinghouse Atomic Research Plant), Armstrong County, and Pittsburgh (BJD)

Construct access roads and complete other site development for the Great Meadows Amphitheater and for Ohiopyle State Park, Fayette County, as needed

Undertake strip mine restoration projects at White Oak Borough, Allegheny County, and Burgettstown, Washington County

Undertake mine subsidence project in South Pittsburgh, Allegheny County

Undertake mine fire control projects at Iselin (Indiana County), Harmer Township (Allegheny County), Graham Boulevard, Penn Hills Township (Allegheny County), and Lockview Street, Monessen (Westmoreland County)

Construct Section 221 housing in Pittsburgh (3 sponsors for 3 projects)

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

CENTRAL SUSQUEHANNA DISTRICT

Construct new facilities at the Geisinger Medical Center in Danville

Improve the Renovo Hospital

Construct vocational-technical schools in Northumberland County (Shamokin-Mt. Carmel area and Snyder-Union-Northumberland area) and Lock Haven, Clinton County

Construct access roads and/or site development for Glen Burn (Shamokin) coal mine museum

Construct access roads and/or site development for the Denholm Industrial Park site at Mifflintown, for industrial park sites at Shamokin, Milton, Sunbury, Lewistown, Williamsport, and Bloomsburg, and for a proposed "research park" in Centre County

Construct access road to serve Blanchard Dam recreation area

Construct science or engineering facility at Bucknell University related to industrial training

Construct or extend airport facilities to serve Milton-Lewisburg and Bloomsburg areas

Expand the sewage treatment plant at Mifflintown to serve industries and enlarged high school

Construct additional studios and other facilities for WPSX, the educational television station at The Pennsylvania State University

Undertake mine fire control project at Coal Run, Northumberland County

Construct Section 221 housing in Lock Haven

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED PROJECTS FOR THE

THREE YEAR PERIOD ENDING JUNE 30, 1971

NORTH CENTRAL DISTRICT

Construct classroom building at the Bradford Campus of the University of Pittsburgh

Construct aircraft landing strip at Quehanna

Construct vocational-technical schools in McKean County and in Cameron-Elk Counties

Construct addition to Clearfield Hospital

Construct access roads, and water and sewer lines, to serve industrial parks near Brookville, Bradford, Philipsburg, DuBois, Ridgway-St. Marys-Johnsonburg, the Wolf Lick Interchange (Clearfield), and the Otocsin recreation area

Improve the water supply in St. Marys

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED WATER RESOURCES PROJECTS

JANUARY, 1968

Emergency Project

A. Lackawanna River and Susquehanna River Mine Drainage Abatement, Subsidence Prevention and Flood Protection

Abatement of mine drainage pollution (pumps, treatment works, land reclamation, and restoration), mine flushing and grouting.

Estimated cost: $68.2 million.

Top Priority Projects

B. Sewickley Creek Watershed - Flood Protection and Water Supply

Retarding structures on streams and channel improvement to provide floodwater protection and industrial water supply for industries between Greensburg and Youngwood. (P.L. #566 Project)

Estimated cost: $3,528,800.

C. Otocsin Reservoir and Recreation Area

Construction of reservoir in major tourist and recreation area; undertaking of project to be coordinated with City of DuBois by the Department of Forests and Waters.

Estimated cost: $29 million including private investment.
Reservoir public investment $3 million.

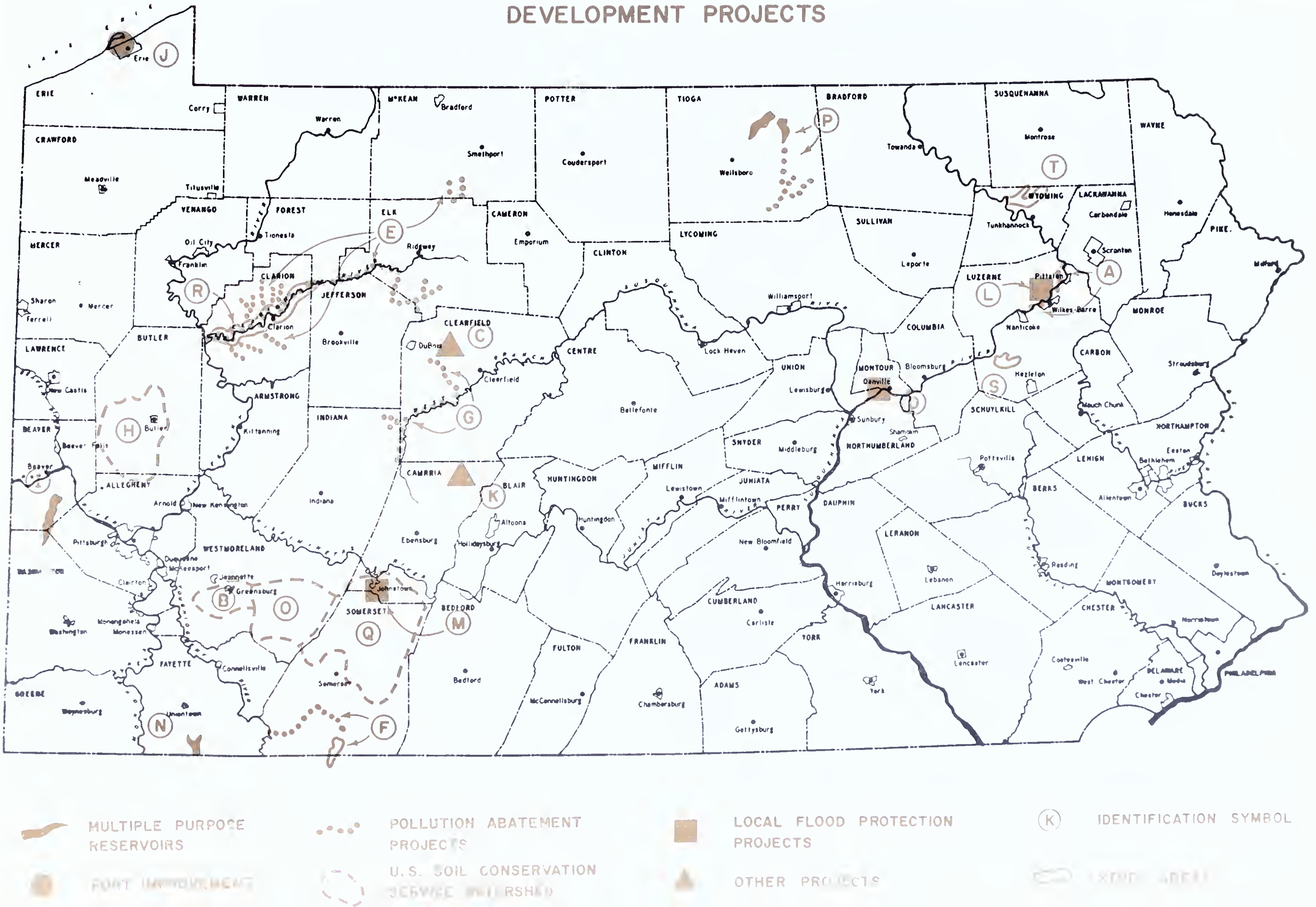
D. Sechler's Run Flood Protection

Flood control project on Sechler's Run; to protect industrial and commercial areas of Danville.

Estimated cost: $1,150,000.

Map 10

RECOMMENDED WATER RESOURCE DEVELOPMENT PROJECTS



RECOMMENDED WATER RESOURCE DEVELOPMENT PROJECTS

A. Lackawanna River and Susquehanna River Emergency Project, North Branch Susquehanna and Lackawanna River Basins.

B. Sewickley Creek Watershed -- Flood Protection and Water Supply, Westmoreland County.

C. Otocsin Reservoir and Recreation Area, Clearfield County.

D. Sechler's Run Flood Protection, Montour County.

E. Clarion River Basin Mine Drainage Abatement, Clarion River Basin.

F. Casselman River Mine Drainage Abatement, Casselman River.

G. Upper West Branch Susquehanna River Mine Drainage Abatement, West Branch Susquehanna River Basin.

H. Connoquenessing Creek Watershed -- Flood Control, Water Supply, Recreation, Butler County.

I. Raccoon Creek Reservoir, Beaver and Washington Counties.

J. Port of Erie Dredging, Erie County.

K. Naturealm Conservation -- Education Area, Cambria County.

L. Abrahams Creek Flood Protection, Luzerne County.

M. Sam's Run Flood Protection, Cambria County.

N. Big Sandy Creek Reservoir, Fayette County.

O. Upper Loyalhanna Creek Watershed -- Flood Control, Water Supply, Recreation, Westmoreland County.

P. Tioga-Hammond Reservoir and Mine Drainage Abatement, Tioga County.

Q. Stony Creek Watershed -- Flood Control and Recreation, Somerset County.

STUDY AREAS

R. St. Petersburg Reservoir, Clarion County.

S. Wapwallopen Creek Reservoir, Luzerne County.

T. Meshoppen Creek Reservoir, Wyoming County.

E. Clarion River Basin Mine Drainage Abatement

Mine drainage abatement work in the Clarion River Basin, to restore water quality in Clarion River and its major tributaries.

Estimated cost: $60 million.

F. Casselman River Mine Drainage Abatement

1. Abatement of mine drainage to restore fish and acquatic life in the Casselman and Youghiogheny Rivers and to protect the recreational use of Ohiopyle State Park, the first step toward the complete abatement of mine drainage in the Youghiogheny River Basin.

Estimated cost: $5 to 7 million.

2. Further locational and engineering study of the U. S. Army Corps of Engineers, proposed multi-purpose reservoir, Upper Casselman River.

G. Upper West Branch Susquehanna River Mine Drainage Abatement

Corrective work to protect the water quality of the Curwensville Reservoir and a first step towards complete abatement of mine drainage in the West Branch Basin.

Estimated cost: $7.7 million.

H. Connoquenessing Creek Watershed - Flood Control, Water Supply, Recreation

Flood prevention, water supply and recreation project; to benefit West Central Butler County, including Butler and Zelienople. (P.L. #566 Project)

Estimated cost: $14,637,300.

I. Raccoon Creek Reservoir

U. S. Army Corps of Engineers multi-purpose reservoir, adjacent to Raccoon Creek State Park; flood control, water quality, water supply, recreation.

Estimated cost, including acid stream and strip mine reclamation: $35 million.

J. Port of Erie Dredging

Dredging of West Bay Area and proper disposal of dredged material.

Estimated cost: $2 million.

K. Naturealm Conservation - Education Area

Development of water-related improvements and facilities at an existing reservoir; to provide a conservation education area.

Estimated cost: $9.5 million.

L. Abrahams Creek Flood Protection

Local flood protection; levee and channel improvements to alleviate flooding of industrial and commercial areas in Wyoming and West Wyoming in Luzerne County.

Estimated cost: $500,000.

M. Sam's Run Flood Protection

Repair and extension of channel improvements on Sam's Run in Johnstown and Lorain Borough; to protect residential and industrial areas.

Estimated cost: $320,000.

N. Big Sandy Creek Reservoir

U. S. Army Corps of Engineers multi-purpose reservoir; final location and design of project to be coordinated between the Corps of Engineers and the Department of Forests and Waters.

Estimated cost; including recreation facilities: $25 million.

O. Upper Loyalhanna Creek Watershed - Flood Control, Water Supply, Recreation

Flood control, recreation and water supply project; to benefit Eastern Westmoreland County, including Ligonier-Latrobe area. (P.L. #566 Project)

Estimated cost: $7,621,400.

P. Tioga-Hammond Reservoir and Mine Drainage Abatement

U. S. Army Corps of Engineers reservoir project, flood control and recreation purposes; project already authorized; acceleration urgent. Also, abatement of mine drainage pollution in watershed is needed.

Estimated cost:	reservoir construction:	$57.5 million
	pollution abatement:	7.25 million

Q. Stony Creek Watershed - Flood Control and Recreation

Flood control and recreation project to benefit Hooversville and Blough communities, alleviate annually recurring damage to railroad facilities. (P.L. #566 Project)

Estimated cost: $7,851,260.

Study Projects

R. Further study of the construction of a multi-purpose reservoir proposed by the U. S. Army Corps of Engineers, on the Clarion River, near Saint Petersburg in Clarion County, including the consideration of the total impact and effect of this reservoir.

S. Study of the proposed reservoir and recreation facility, U. S. Army Corps of Engineers, on Wapwallopen Creek in Luzerne County.

T. Study of the proposed reservoir and recreation facility, U. S. Army Corps of Engineers, on Meshoppen Creek in Wyoming County.

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

RECOMMENDED RESEARCH PROJECTS

The consideration of research projects to be undertaken will include the following recommended list:

1. Travel Investment Opportunities in Pennsylvania -

Study travel investment opportunities in the following selected areas in Pennsylvania: Otocsin - Clearfield County; Kinzua Dam and Allegheny National Forest - Warren and Forest Counties; Black Moshannon State Park, Blanchard Reservoir - Centre County; Ohiopyle, Great Meadows - Fayette County; Moraine Reservoir, Shenango Reservoir - Butler and Mercer Counties; Prince Gallitzin State Park - Cambria County. The report will include; location information; specific site data; development concepts, ideas and proposals; incentives and available financing; investment opportunities and potential earnings; and specific recommendations regarding changes in State policies or procedures which prospective investors indicate might create a more favorable climate for investment.

2. Investment Guide to Private Recreational Development in Northeastern Pennsylvania -

Develop recommendations for private investments in the recreation industry in northeastern Pennsylvania. The recommendations will assist in the stimulation of private investment and economic development activities and will serve as a guide to public policy development. Previous research has shown that the existing resources and the economic base of northeastern Pennsylvania are conducive to the development of many tourist and recreation facilities. If travel investors and those in public policy decision-making positions are provided data which show in detail that their investments would be highly productive and profitable, this development program would favorably affect the overall growth of the region's economy.

3. The "Brain Drain" -

There is evidence that the number of better educated persons is growing more slowly in Appalachia Pennsylvania than elsewhere in the State and in the Nation. The study will determine where these relative losses are occurring and in what occupational groups the lag is greatest.

4. The Service Industry -

The service industry category includes a fairly wide cross section of workers, some of whom perform menial tasks and receive low pay while others such as teachers are also included but receive much higher wages. Development of the service industry in Appalachia is often urged, but it is far from clear that increased jobs in this sector help to achieve the basic goal of increasing per capita income. A study of methods of measurement, economic impact, and State strategy concerning this component of the industrial structure is needed. The study should define those areas of service employment which help a local economy and those that do not. The social significance of this employment should be carefully evaluated since many service jobs are minority group jobs.

5. The Distribution Industry -

Northeastern Pennsylvania soon will have four new Interstate highways, giving the area a remarkable transportation asset which would seem to invite distribution centers for major industries. A study should be completed to determine how the region best can capitalize on its new asset and what must be done to attract distribution facilities.

6. The Carbon Industry -

The carbon industry centered on Saint Marys is an unusual economic specialty which has spurred much of the growth in north central Pennsylvania and spun off small related enterprises. It seems to have a good potential in industries such as space and nuclear energy so there should be a study of the carbon, graphite, powdered metal, and related industries to determine what can be done to help north central Pennsylvania increase its share of employment as the industry grows.

7. Highway Impact -

Under the assumption that new highways are important to economic development, study the impact of I-80, the Keystone Shortway, which is opening a new transportation corridor. The study might also cover an unchanged existing highway and an upgraded existing highway for comparison to determine which produces the greatest economic return.

8. Freight Rates and Industrial Location -

Study freight rates and compare them among different areas. This study would be based on the premise that the presence of railroads and highways is necessary for industrial development but that unless freight and express rates for an area are competitive, the area may not be able to attract certain new industries.

STATEWIDE DEVELOPMENT PROGRAM

On the basis of the experience of the Pennsylvania Department of Commerce in implementing the Appalachian Regional Program in Pennsylvania, the Pennsylvania State Planning Board, in addition to the annual review and updating of this Development Plan, will proceed with the formulation of a similar plan for the social, economic, and environmental development of the State.

The first phase of this planning effort will cover the fifteen county area comprising the non-Appalachian portion of the State.

This effort will consider the physical, economic and human resources qualities of those State Planning Regions making up this fifteen county share of "megalopolis" in Pennsylvania. It will strive to articulate policies and plans as the basis for programs and projects dealing with this vital part of the Commonwealth. Emphasis will be directed to a policy for urban development that recognizes the urgencies of land use, land conservation and the amenities in a burgeoning environment; the options available in allocating resources for residential, commercial and industrial development; and the priorities of investment with respect to transportation, educational programs and facilities, medical centers, cultural activities, and the rebuilding of cities paralleled by the possibilities of new town development.

The Pennsylvania Statewide Development Plan will use to the fullest extent the Appalachian experience which demonstrated that the State-Federal partnership as developed in the Appalachian Program is exemplary and warrants Statewide application as an approach to the coordination of State and Federal programs and dollars with local capabilities.

APPENDICES

APPENDIX A

ABILITY TO PAY

Section 200A-4.3 of The Appalachian Regional Commission Code requires that the Appalachian Development Plan include " . . . a statement of the policies and procedures established by the State pursuant to Section 214-2.7 for determining (i) the relative financial resources available to project applicants; and (ii) that State contributions to projects of such kind in the State are on a basis equitable to its Appalachian area."

Section 214-2.7 (2) of the Code requires that the Appalachian Development Plan include " . . . a description of the methods used to measure the relative financial resources of project applicants and to assure an equitable allocation of State contributions for projects to its Appalachian area, and shall explain the derivation, rationale, and application of such methods."

The material which follows is presented to fulfill these requirements.

Decisions about which projects are to be supported as part of the State's Appalachian effort are made prior to decisions about the amount of supplemental assistance. The "ability to pay" procedures are used to determine the amount, if any, of supplemental assistance.

The amount of supplemental assistance for a project is based on need, and is negotiated and determined on a project by project basis. The aim is to provide the minimum amount needed to enable the project to be completed, coupled with the maximum amount of local effort which can be contributed to the project and the maximum possible amount of the basic program grant.

The information needed to measure the relative financial resources of a project applicant is obtained from the documentation required to be submitted with form ARC-1, which now includes the points listed in the Code and the information formerly requested by the State in its own application form. Ability to pay determinations or rankings made by State functional agencies also are used.

Factors considered by the State include:

A. Local unexpended bonding capacity and statements of local intentions to use such unexpended capacity.

B. Local fiscal effort (per capita income as a percent of local public revenue) as compared to the effort made by other jurisdictions in the State's Appalachian area.

C. Charges for use of the facilities as compared to charges for similar services in nearby jurisdictions of comparable size.

D. Fund raising efforts of non-public applicants.

The State believes that its experience has demonstrated clearly that a special mathematical formula is unnecessary to determine the amount of supplemental assistance.

Overall State expenditure patterns are studied to insure that State contributions are on a basis equitable to the Appalachian area. However, no specific project or program fund allocations are made on the basis of "Appalachia" or "non-Appalachia" areas or communities.

APPENDIX B

PROJECTIONS OF EMPLOYMENT AND POPULATION

Preparation of employment and population projections by the State Planning Board staff in conjunction with the Appalachian development program was initiated in the Fall of 1967 to provide an understanding of the past and probable future character, magnitude, and location of growth and development in Appalachia Pennsylvania and to assist State and local officials to assess more objectively the problems associated with the development of the Appalachian region.

The specific objectives of the study were to develop projections of 1975 employment for 27 major industry groups in each local development district and to develop provisional projections of 1975 population aggregates.

EMPLOYMENT PROJECTIONS

The projection technique employed by the State Planning Board staff was less complex than other possible methods which might have been used. Statewide projections of industry employment in 1975 were disaggregated to a set of substate areas by applying to the State control totals the projected shares of local area employment by industry.

The projection technique departed somewhat from the conventional, purely quantitative approach in that considerable judgment and local feedback were introduced into the projection procedure. Thus, the projected employment figures shown in this Plan report have been derived basically from the application of statistical methods, but in their final form they also reflect the expert opinions of industrial economists and labor market analysts as well as the thinking of local planners who have intimate knowledge of the capabilities of their own areas to support the kind of development that was projected.

For purposes of this study, 48 labor market areas delineated by the Pennsylvania Department of Labor and Industry, Bureau of Employment Security, were selected as the basic statistical units. The selection of labor market areas rather than political subdivisions as the building blocks minimized deficiencies in basic data that would otherwise have occurred and reduced distortions to output data resulting from the commuting factor. With minor exceptions, all labor market areas were coterminous with county and State boundaries.

Input data were obtained from the manufacturing employment series published by the Bureau of Statistics, Pennsylvania Department of Commerce (formerly in the Department of Internal Affairs) and from the non-manufacturing employment series published by the Bureau of Employment Security, Pennsylvania Department of Labor and Industry. State control totals of industry employment for 1975 were based on unpublished projections prepared by the Bureau of Employment Security and on revisions thereof.

Specific assumptions used in developing the employment projections are listed below:

(1) The 1958 to 1965 period was selected as the best indicator of future trends in local area shares of Statewide manufacturing employment. The selection of this particular time period avoided some of the Vietnam War bias and the employment irregularities that occurred in many sections of the State during the early and middle 1950's. Projections of non-manufacturing employment were based on a relatively short period of time extending from 1961 to 1965. A longer time period was not selected here because of the lack of useful labor market area data on a comparable basis for earlier years.

(2) The future trend in a local area's percentage share of Pennsylvania employment within an industry was assumed to follow a straight-

line projection of the historical trend in this percentage relationship over the base period.

(3) The increase or decrease in a local area's share of Statewide employment within an individual industry between the base period and 1975 was limited to an amount equal to the average deviation from the mean change in the percentage share computed for all substate areas in that industry.

(4) The local development district employment figures were derived by aggregating by industry the labor market area projections.

(5) The labor force projections for labor market areas and counties were derived from employment projections by assuming a 3.5 percent rate of unemployment in 1975.

(6) The employment figures for the self-employed, unpaid family and domestic workers category shown in this Plan report were based almost entirely on judgment evaluations as opposed to figures that would have been obtained had normal projection techniques been applied. This variation from standard procedure was made necessary because changes in definition and reporting methods over the past few years have reduced significantly the predictive value of the historical series within this employment category.

The projections of employment resulting from the application of the changing shares technique were subsequently analyzed and subjected to careful examination by industrial economists, labor market specialists, and planners at the State and local levels who have expert knowledge about the growth prospects for Pennsylvania industries and about the capacities of individual substate regions to support the kind of development projected. Projections of industry employment for each labor market area were then revised upward or downward on the basis of this evaluation. In most cases, the revisions made were small in relation to the employment magnitudes originally projected.

POPULATION PROJECTIONS

Population was regarded primarily as a function of economic opportunity. Thus, it was necessary to first project future employment and to determine the size of the population that could be supported by the economy in 1975.

The future size of the labor force for each labor market area in the State was computed directly from the projected employment in an area by applying an assumed unemployment rate of 3.5 percent. Once the size of the labor force had been determined for each labor market area, estimates were then made of labor force participation rates in 1975 and the total population for 1975 was then calculated.

Estimates of future labor force participation rates for individual labor market areas were a reflection of at least three major considerations: (1) observed changes in the ratio of labor force to total population in each area over the 1960 to 1965 period; (2) the probable effects of future changes in local economic conditions on labor force participation within an area; and (3) Statewide trends in labor force participation rates to 1975 as determined by the U. S. Bureau of Labor Statistics.

Projections of net migration between 1965 and 1975 were prepared next for each labor market area in the State. The basic procedure was to first disaggregate U. S. Bureau of the Census projections of natural increases in Pennsylvania's population, assuming a net migration factor of zero, to all labor market areas in the State. Estimates of net migration for individual labor market areas were then computed as the differences between the size of population resulting from natural increases alone and the population that could actually be supported by the local economy.

The migration component of future population change thus determined was subsequently compared with current migration trends and used as checks against the validity of certain underlying assumptions and the reasonableness of the employment and population projections obtained.

APPENDIX C

EMPLOYMENT SHIFT ANALYSIS

ANALYTICAL FRAMEWORK

The differential shift technique described here has been used by the Pennsylvania State Planning Board as an analytical tool for understanding past as well as projected development of a district economy. The technique permits comparison of employment growth in different districts of the State over a given time interval, both totally and for each of the 27 industry groups listed, and allows identification of factors which relate to the differences in the rates of employment growth among districts.

The objective of the analysis was limited to the sorting-out of three basic factors which partially explain the underlying reasons for differences in the intensity of economic activity among geographic areas: (1) the national growth factor; (2) the industrial mix factor; and (3) the competitive factor. Using the national all-industry growth rate as the first factor, it was possible to determine the growth characteristic of a specified national industry over a given span of time. The rate of growth of a particular national industry was characterized as "rapid" if it exceeded and "slow" if it fell short of the growth rate of all national industries combined during the same period.

From this observation derived the industrial mix component of employment change which was computed on the basis of the distribution of industrial employment within districts. Whether or not a district had a rapid or slow growth industrial mix depended upon the distribution of local employment among the various industries that make up the industrial profile. When the industrial composition of a district was heavily weighted by employment in national rapid growth industries, the district was said to have a favorable industrial mix. Conversely, employment heavily concentrated in national slow growth or declining industries implied an unfavorable industrial mix.

The third component of employment change called the "competitive effect" took into account the performance of a particular industry in a district in relation to the performance of that industry nationally. The rate of growth of a district within a particular industry was characterized as "rapid" if it exceeded and "slow" if it fell short of the growth rate in that industry nationally during the same time period. If employment in a local industry was growing more rapidly (or declining more slowly) than the same industry nationally, the district obtained increasing shares of national employment in that industry and the district was said to be competing effectively with the rest of the Nation for new employment growth within the industry. If, on the other hand, employment in a local industry was growing less rapidly (or declining more rapidly) than the same industry nationally, the district experienced decreasing shares of national employment in that industry. In this case, the district was not competing successfully with the rest of the Nation for growth in industrial employment.

The relationships described above can be expressed mathematically in the following set of three equations:

$$\begin{aligned} N &= c_1 X \\ I &= X\,(c_2 - c_1) \qquad (1) \\ R &= X\,(c_3 - c_2) \end{aligned}$$

where N = change in industry employment related to national growth.

I = change in industry employment related to the mix effect.

R = change in industry employment related to the competitive effect.

X = local base year employment within an individual industry.

c_3 = growth rate for the same industry locally.

c_2 = growth rate for the same industry nationally.

c_1 = national all-industry growth rate.

In this study, the performance levels of the seven local development districts in Appalachia Pennsylvania were measured against a national frame of reference and against employment growth expectations in the Mid-Atlantic states region consisting of Pennsylvania, New York, New Jersey, Delaware, Maryland, and the District of Columbia. The national framework was used in combination with the Mid-Atlantic framework in order to isolate geographical shifts in employment that are more or less typical of a selected group of eastern states from those that are unique to the local economies under investigation. Thus, another dimension was added to the analysis in that the total competitive effect was broken into two component parts: (1) the competitive effects associated with a district's performance within a specific industry sector relative to the Mid-Atlantic states region; and (2) the competitive effects associated with geographical shifts in economic activity between the Mid-Atlantic states region and the rest of the Nation.

This relationship may be formulated with the use of mathematical symbols. In the set of equations shown above, R is a composite of two factors - local performance relative to the Mid-Atlantic region and the Mid-Atlantic region's performance relative to the Nation within an industry - so that:

$$(2) \qquad R = R_L + R_M$$

where R_L is the change in local employment obtained by applying to the local employment base the difference between the local growth rate and the Mid-Atlantic growth rate within a specific industry, and where R_M is the change in local employment obtained by applying to the local employment base the difference between the Mid-Atlantic growth rate and the growth rate for the same industry nationally. The algebraic sum of R_L and R_M is equal then to the total competitive effect, R.

USING THE TABLES

Two sets of tables are included in this Appendix. The first set contains numerical values obtained by applying the differential shift analysis to projected changes in employment within 27 industry categories over the period from 1965 to 1975 for Appalachia Pennsylvania and its seven local development districts. These tables show how well the 27 industry categories are expected to perform in a district over the given interval of time, and provide in quantitative form an explanation for high or low levels of performance relative to national expectations. A performance code has been devised to provide a quick identification of the main characteristics of a district's employment change within the 27 industry categories listed. The tabulation of performance codes is intended to be used to interpret the code letters shown in the tables.

It should be noted that differential shift analysis deals primarily with change relatives rather than with absolute changes in employment. Hence, a negative value does not indicate loss of employment within an industry (except in the total change column), but does indicate a relatively poor performance based on the standard against which it is measured. Conversely, a positive value does not indicate gain of employment, but implies a relative shift upward from the level of employment that would be attained if national norms prevailed locally.

Values in the national growth column represent the change in employment that would occur if each local industry grew at the national all-industry growth rate. All values in the national growth column must necessarily be positive, since total employment at the national level is expected to expand over the 1965 to 1975 period.

Values in the industrial mix column provide information about the industrial composition of an area. A positive value in the industrial mix column indicates that the expansion rate for the industry at the national level is expected to be greater than that of all national industries combined, and shows how much of the total change in local employment within the industry is related to this factor. A negative value signifies a national slow growth or declining industry and provides information about the relative loss in employment in relation to the change that would occur if the industry was expected to grow at the national all-industry growth rate.

If the algebraic sum of the values in the industrial mix column is negative, this means that the industrial composition of the district is oriented toward slow growth or declining industries. A positive value implies employment heavily concentrated in rapid growth industries.

Values in the total competitive effect column may be interpreted as meaning that the percentage change in district employment within an industry is expected to be less than (when the value sign is minus) or greater than (when the value sign is plus) the percentage change for the same industry nationally. The absolute values (ignoring signs) show the relative employment gain or loss resulting from differential rates of growth between the district and the Nation within a particular industry.

Values in the total competitive effect column are net of employment changes related to the industrial mix effect; hence, the algebraic sum of the values reveals on an aggregate basis the relative change upward or downward in local employment from national growth expectations, independent of structural differences in employment between the district and the Nation.

One of two columns which together constitute the sub-components of employment changes related to the total competitive effect depict a local development district's performance expectations in a particular industry relative to the same industry in the Mid-Atlantic states region. The numerical values in this column indicate whether a district is expected to compete successfully with the Mid-Atlantic region for new growth and jobs within an individual industry, and also show the amount of employment involved. A minus sign implies that the district is not expected to do as well as the rest of the Mid-Atlantic region within this industry and a plus sign means that the district is expected to perform better than the Mid-Atlantic region. Similarly, the values entered in the other column, labeled "Mid-Atlantic Relative to United States," show the local employment effects of the Mid-Atlantic region's performance relative to the rest of the Nation.

Clearly, an industry may show an absolute gain in employment between 1965 and 1975 and yet have a minus sign in any of the columns relating to the competitive factor. This means that although the industry is expected to gain in employment, its percentage gain will be less than either the percentage gain for the same industry in the Mid-Atlantic region or the percentage gain for the particular industry nationwide. It is significant that all values are negative in the column showing the Mid-Atlantic region's performance relative to the Nation. The implication of this is that the Mid-Atlantic region's share of national growth will diminish within all industry categories during the period from 1965 to 1975.

Several entries contained in the tables will add horizontally:

1. Industrial mix effect plus total competitive effect equals net relative change in employment.

2. National growth plus industrial mix effect plus competitive effect equals total change in employment.

The net relative change represents the relative gain or loss in employment attributable to the growth characteristic of the industry nationally and attributable to the performance expectations of the industry locally in relation to the growth rate within the same industry nationwide. The total change in employment is simply the absolute gain or loss in local employment expected between 1965 and 1975.

The format of the second set of analytical tables is nearly the same as the first, only the framework for analysis upon which the tables are based is different in at least two respects:

1. It provides an understanding of past development of a district's economy. Thus, the data contained in the tables relate to the 1960 to 1965 period as contrasted with the first set of tables which show employment changes related to future expectations.

2. It provides a comparison of employment changes in local development districts using Pennsylvania as the frame of reference rather than a national framework.

One may analyze the contents of these tables in similar fashion as was described above in connection with the first set of tables. However, performance codes are not provided.

SOME IMPLICATIONS OF THE COMPETITIVE FACTOR IN REGIONAL DEVELOPMENT

Broadly speaking, Appalachia Pennsylvania is expected to perform, in the economic sense, more nearly like its neighboring states than like the rest of the Nation since it shares with the multi-state Mid-Atlantic region many of the comparative disadvantages responsible for the differences in growth rates between the Mid-Atlantic states region and other sections of the country. National forces, for example, have given rise to rapidly growing markets in the western and southwestern states which have tended to attract new industry and investment capital to these areas at the expense of losses in other sections of the United States including the Mid-Atlantic region. Moreover, the general tendency toward industrial dispersion and the decreasing importance of resource orientation in industrial location decisions have also had adverse effects on economic growth in the Mid-Atlantic region and in Appalachia Pennsylvania. Hence, long-term national geographical shifts in economic activity cannot be ignored in any program designed to reduce growth differentials between Appalachia Pennsylvania and the rest of the Nation.

Economic growth must come from within. Development policy in Appalachia Pennsylvania can bring about change if it seeks to strengthen the area's relative competitive advantages within a larger multi-state regional economy by focusing attention on certain growth determinants which are regarded as endogenous to the local area. It can help to develop human and natural resources, improve community facilities, build local infrastructure, and effect a gradual transition from old-line to new-line, innovative industries by means of selective industrial development programs that ultimately will result in the attraction of industries that provide long term growth and economic stability.

Clearly, an economic development strategy in Appalachia Pennsylvania must be sensitive to the realities of the regional setting and cannot realistically be geared solely to a national development framework. (What is best for the Nation is not necessarily best for the region.) For Appalachia Pennsylvania to move closer toward a basic services oriented economy, as is often suggested since this happens to be the most rapidly growing segment of the national economy, the region must first reduce structural weaknesses and production inefficiencies within the commodity producing sectors so that growth in services and basic manufacturing will be mutually supporting. Development efforts must be concentrated on those segments of the economy which have the best chance for growth nationally and in Appalachia Pennsylvania. Equally important are the development programs keyed toward the objective of improving the internal efficiency of existing industrial establishments so that they may operate at costs competitive with firms located elsewhere.

TABLE A. APPALACHIA PENNSYLVANIA AND DISTRICTS - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

District	Employment*		Components of employment change**						
			Changes related to						
					Competitive effect				
	1965	1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change
Southwest	901,300	1,025,100	183,860	- 2,300	15,370	- 73,130	- 57,760	- 60,060	123,800
Northeast	289,300	333,100	59,020	- 6,940	21,580	- 29,860	- 8,280	- 15,220	43,800
Northwest	234,100	263,700	47,750	1,850	1,430	- 21,430	- 20,000	- 18,150	29,600
Central Susquehanna	177,600	208,200	36,230	- 3,220	12,680	- 15,090	- 2,410	- 5,630	30,600
Turnpike	144,000	160,800	29,370	- 5,710	4,650	- 11,510	- 6,860	- 12,570	16,800
North Central	73,600	84,000	15,010	- 80	2,780	- 7,310	- 4,530	- 4,610	10,400
Northern Tier	39,500	46,600	8,060	- 3,630	5,640	- 2,970	2,670	- 960	7,100
Appalachia Pennsylvania	1,859,400	2,121,500	379,320	- 20,000	64,290	- 161,510	- 97,220	-117,220	262,100
Non-Appalachia Pennsylvania	2,106,800	2,474,900	429,780	24,640	102,270	- 188,590	- 86,320	- 61,680	368,100
Pennsylvania	3,966,200	4,596,400	809,100	4,640	166,560	- 350,100	- 183,540	-178,900	630,200

Appalachia Pennsylvania accounts for nearly two-thirds of the net relative downward shift in Statewide employment, and for more than half of all losses in total competitive effects. In addition to relative losses due to poor competitive position, growth in Appalachia Pennsylvania will be held back by an adverse mix of industries as contrasted with an industrial structure that is favorable for long-term growth in the non-Appalachian portion of the State. Both the Appalachian and non-Appalachian portions of the State will obtain increasing shares of Middle-Atlantic region employment, yet less than two-fifths of the positive local contributions to growth relative to the Middle-Atlantic region will come from Appalachia Pennsylvania.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE B. APPALACHIA PENNSYLVANIA AND DISTRICTS - COMPONENTS OF EMPLOYMENT CHANGE AS RATIOS OF THE NATIONAL GROWTH COMPONENT, 1965 to 1975

	Components of employment change						
			Competitive effect				
District	National growth 1/ (1)	Industrial mix effect (2)	District relative to Mid-Atlantic (3)	Mid-Atlantic relative to United States (4)	Total competitive effect 2/ (5)	Net relative change3/ (6)	Total change4/ (7)
	---------------- Ratio of employment change to the national growth component ----------------						
Southwestern	1.000	- .013	.084	- .398	- .314	- .327	.673
Northeastern	1.000	- .118	.366	- .506	- .140	- .258	.742
Northwestern	1.000	.039	.030	- .449	- .419	- .380	.620
Central Susquehanna	1.000	- .089	.350	- .417	- .067	- .155	.845
Turnpike	1.000	- .194	.158	- .392	- .234	- .428	.572
North Central	1.000	- .005	.185	- .487	- .302	- .307	.693
Northern Tier	1.000	- .450	.700	- .368	.331	- .119	.881
Appalachia Pennsylvania	1.000	- .053	.169	- .426	- .256	- .309	.691
Non-Appalachia Pennsylvania	1.000	.057	.238	- .439	- .201	- .144	.856
Pennsylvania	1.000	.006	.206	- .433	- .227	- .221	.779

1/ Column (7) minus column (6)
2/ Column (3) plus column (4)
3/ Column (7) minus column (1); or column (2) plus column (5)
4/ Column (1) plus column (2) plus column (5)

TABLE C. PENNSYLVANIA - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

			Components of employment change **						
			Changes related to						
					Competitive effect				
Industry	Employment* 1965	Employment* 1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change
Agriculture	108,800	81,500	22,200	- 58,130	14,030	- 5,390	8,640	- 49,500	- 27,300
Mining	42,400	31,800	8,650	- 16,510	2,580	- 5,320	- 2,740	- 19,250	- 10,600
Contract construction	159,200	200,000	32,480	8,720	11,140	- 11,540	- 400	8,320	40,800
Trans., com. & p.u.	248,900	271,000	50,780	- 32,360	16,440	- 12,740	3,690	- 28,670	22,100
Trade	710,000	842,000	144,840	- 43,520	102,110	- 71,430	30,680	- 12,840	132,000
Finance, ins. & r.e.	157,500	179,500	32,130	1,540	- 1,100	- 10,570	-11,670	- 10,130	22,000
Services	564,200	713,800	115,100	70,640	3,180	- 39,320	-36,140	34,500	149,600
Civilian government	498,900	664,100	101,780	138,890	- 46,530	- 28,940	-75,470	63,420	165,200
Food products	118,200	111,000	24,110	- 24,550	- 3,220	- 3,550	- 6,760	- 31,310	- 7,200
Tobacco products	10,400	8,800	2,120	- 3,070	690	- 1,340	- 650	- 3,720	- 1,600
Textile products	72,500	63,300	14,790	- 17,850	- 3,580	- 2,560	- 6,140	- 23,990	- 9,200
Apparel & related	185,900	190,500	37,920	- 20,130	24,600	- 37,790	-13,190	- 33,320	4,600
Paper products	44,300	51,900	9,040	400	3,860	- 5,690	- 1,840	- 1,440	7,600
Printing & publishing	66,500	77,700	13,570	- 2,120	5,650	- 5,900	- 250	- 2,370	11,200
Chemical products	50,000	59,200	10,200	540	2,200	- 3,740	- 1,540	- 1,000	9,200
Petroleum & related	14,200	14,500	2,900	- 4,300	2,050	- 340	1,710	- 2,600	300
Rubber & plastics	28,300	34,300	5,770	3,950	- 2,200	- 1,520	- 3,720	230	6,000
Leather products	32,800	29,600	6,690	- 7,240	- 2,420	- 230	- 2,650	- 9,890	- 3,200
Lumber, wood & furn.	40,500	43,400	8,260	- 7,020	3,180	- 1,520	1,660	- 5,360	2,900
Stone, clay & glass	60,300	66,000	12,300	- 6,840	720	- 480	240	- 6,600	5,700
Primary metals	239,900	241,400	48,940	- 43,900	10,120	- 13,660	- 3,540	- 47,440	1,500
Fabricated metals	107,500	120,400	21,930	6,100	- 610	- 14,510	-15,120	- 9,030	12,900
Non-elec. machinery	127,100	151,600	25,930	6,360	15,020	- 22,800	- 7,780	- 1,430	24,500
Electrical machinery	127,800	171,000	26,070	40,920	5,450	- 29,240	-23,790	17,130	43,200
Transportation equip.	82,100	97,800	16,750	5,270	1,620	- 7,940	- 6,320	- 1,050	15,700
Instruments	29,600	38,000	6,040	5,860	- 60	- 3,430	- 3,490	2,360	8,400
Misc. manufacturing	38,400	42,300	7,830	3,000	1,690	- 8,630	- 6,940	- 3,930	3,900
Total**	3,966,200	4,596,400	809,100	4,640	166,560	-350,100	-183,540	-178,900	630,200

Despite an overall expansion rate of 630,200 jobs in ten years, employment growth in Pennsylvania is not expected to keep pace with the rest of the United States. The employment lag effect of Pennsylvania in relation to national expectations represents a potential loss of some 178,900 job opportunities that will go unrealized. Most of the growth lag problem is that industries in Pennsylvania tend to grow more slowly than the same industries located elsewhere. Key employment sectors exhibiting large negative competitive effects include: government; services; electrical machinery; fabricated metals; apparel; and finance, insurance and real estate. The industrial mix effect is less important than the competitive effect in explaining Pennsylvania's overall poor performance.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE D . APPALACHIA PENNSYLVANIA - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

			Components of employment change **							
			Changes related to							
					Competitive effect					
Industry	Employment* 1965	Employment* 1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change	Performance code
Agriculture	60,000	46,200	12,240	- 32,060	8,990	- 2,970	6,020	- 26,040	-13,800	CDFIK
Mining	39,600	29,200	8,080	- 15,420	1,910	- 4,970	- 3,060	- 18,480	-10,400	CDGIK
Contract construction	73,000	93,200	14,890	4,000	6,600	- 5,290	1,310	5,310	20,200	ADFHK
Trans., com. & p.u.	126,800	134,200	25,870	- 16,480	4,510	- 6,490	- 1,980	- 18,470	7,400	BDGIK
Trade	320,300	366,700	65,340	- 19,630	32,910	- 32,220	690	- 18,940	46,400	BDFIK
Finance, ins. & r.e.	58,400	64,400	11,910	570	- 2,570	- 3,920	- 6,490	- 5,910	6,000	AEGIJ
Services	256,800	321,400	52,390	32,150	- 2,040	- 17,900	- 19,940	1,210	64,600	AEGHK
Civilian government	230,000	303,800	46,920	64,030	- 23,810	- 13,340	- 37,150	26,880	73,800	AEGHK
Food products	44,200	39,100	9,020	- 9,180	- 3,610	- 1,330	- 4,940	- 14,120	- 5,100	CEGIK
Tobacco products	6,800	6,200	1,390	- 2,010	900	- 880	20	- 1,990	- 600	CDFIK
Textile products	21,900	19,600	4,470	- 5,390	- 610	- 770	- 1,380	- 6,770	- 2,300	CEGIK
Apparel & related	80,700	82,300	16,460	- 8,740	10,290	- 16,410	- 6,120	- 14,860	1,600	BDGIK
Paper products	14,000	18,300	2,860	130	3,120	- 1,800	1,320	1,440	4,300	ADFHJ
Printing & publishing	20,200	25,700	4,120	- 640	3,810	- 1,790	2,020	1,380	5,500	BDFHJ
Chemical products	15,600	19,900	3,180	170	2,120	- 1,170	950	1,120	4,300	ADFHJ
Petroleum & related	4,200	4,300	860	- 1,270	620	- 100	520	- 760	100	CDFIK
Rubber & plastics	11,700	15,500	2,390	1,630	410	- 630	- 220	1,410	3,800	ADGHK
Leather products	14,600	14,100	2,980	- 3,220	- 160	- 100	- 260	- 3,480	- 500	CEGIK
Lumber, wood & furn.	22,200	24,500	4,530	- 3,850	2,460	- 840	1,620	- 2,230	2,300	BDFIK
Stone, clay & glass	39,900	43,200	8,140	- 4,520	0	- 320	- 320	- 4,840	3,300	BDGIK
Primary metals	172,500	174,300	35,190	- 31,570	8,000	- 9,820	- 1,820	- 33,390	1,800	BDGIK
Fabricated metals	53,200	62,000	10,850	3,020	2,110	- 7,180	- 5,070	- 2,050	8,800	ADGIJ
Non-elec. machinery	48,300	58,200	9,850	2,420	6,290	- 8,660	- 2,370	50	9,900	ADGHK
Electrical machinery	63,000	79,800	12,850	20,170	- 1,810	- 14,410	- 16,220	3,950	16,800	AEGHK
Transportation equip.	34,000	42,000	6,940	2,180	2,170	- 3,290	- 1,120	1,060	8,000	AEGHK
Instruments	11,500	15,200	2,350	2,280	410	- 1,330	- 920	1,350	3,700	ADGHK
Misc. manufacturing	16,000	18,200	3,260	1,250	1,280	- 3,600	- 2,320	- 1,060	2,200	ADGIJ
Total**	1,859,400	2,121,500	379,320	- 20,000	64,290	-161,510	- 97,220	-117,220	262,100	

Most of the growth projected for Appalachia Pennsylvania will derive from industry categories that exhibit rapid growth characteristics nationally, but because of the general tendency for Pennsylvania industries to grow more slowly than the same industries located elsewhere, the overall expansion rate in local employment is not expected to keep pace with the rest of the Nation. Substantial losses in competitive effects reflect this less than favorable outlook and implies that Appalachia Pennsylvania, shares with the Mid-Atlantic region a poor competitive position in relation to other sections of the country in obtaining new employment growth. Industrial mix effects in the manufacturing and non-manufacturing sectors are partially offsetting so that on an aggregate basis industrial composition is less significant than the competitive component in explaining Appalachia Pennsylvania's performance expectations.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE E . SOUTHWESTERN DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

			Components of employment change **							
			Changes related to							
					Competitive effect					
	Employment*									
Industry	1965	1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change	Performance code
Agriculture	15,300	12,200	3,120	- 8,180	2,720	- 760	1,960	- 6,220	- 3,100	CDFIK
Mining	17,700	15,100	3,610	- 6,890	2,900	- 2,220	680	- 6,210	- 2,600	CDFIK
Contract construction	42,100	51,300	8,590	2,310	1,350	- 3,050	- 1,700	610	9,200	ADGHK
Trans., com. & p.u.	63,700	68,400	13,000	- 8,280	3,240	- 3,260	- 20	- 8,300	4,700	BDGIK
Trade	175,400	197,900	35,780	-10,750	15,110	-17,640	- 2,530	-13,280	22,500	BDGIK
Finance, ins. & r.e.	36,000	38,800	7,340	350	- 2,480	- 2,420	- 4,900	- 4,540	2,800	AEGIJ
Services	141,300	178,200	28,820	17,690	240	- 9,850	- 9,610	8,080	36,900	ADGHK
Civilian government	106,100	142,900	21,640	29,540	- 8,240	- 6,150	-14,380	15,160	36,800	AEGHK
Food products	20,500	16,800	4,180	- 4,260	- 3,000	- 620	- 3,620	- 7,880	- 3,700	CEGIK
Tobacco products	0	0	0	0	0	0	0	0	0	- - -
Textile products	500	500	100	- 120	40	- 20	20	- 100	0	CDFIK
Apparel & related	5,900	7,300	1,200	- 640	2,040	- 1,200	840	200	1,400	BDFHJ
Paper products	3,800	4,500	780	30	380	- 490	- 110	- 80	700	ADGIJ
Printing & publishing	8,700	10,800	1,780	- 280	1,370	- 770	600	320	2,100	BDFHJ
Chemical products	6,400	8,200	1,310	70	900	- 480	420	490	1,800	ADFHJ
Petroleum & related	2,000	1,800	410	- 610	50	- 50	0	- 610	- 200	CDFIK
Rubber & plastics	3,800	4,700	780	530	- 210	- 200	- 410	120	900	AEGHK
Leather products	300	400	60	- 70	110	0	110	40	100	CDFHJ
Lumber, wood & furn.	4,500	4,500	910	- 780	40	- 170	- 130	- 910	0	BDGIK
Stone, clay & glass	24,800	25,400	5,060	- 2,810	- 1,450	- 200	- 1,650	- 4,460	600	BEGIK
Primary metals	124,200	123,600	25,340	-22,730	3,860	- 7,070	- 3,210	-25,940	- 600	BDGIK
Fabricated metals	28,200	30,700	5,750	1,600	- 1,040	- 3,810	- 4,850	- 3,250	2,500	AECIJ
Non-elec. machinery	21,200	25,700	4,320	1,060	2,920	- 3,800	- 880	180	4,500	ADGHK
Electrical machinery	27,200	30,700	5,550	8,710	- 4,540	- 6,220	-10,760	- 2,050	3,500	AECIJ
Transportation equip.	12,300	14,600	2,510	790	190	- 1,190	- 1,000	- 210	2,300	ADGIJ
Instruments	5,600	6,900	1,140	1,110	- 300	- 650	- 950	160	1,300	AECHK
Misc. manufacturing	3,800	3,200	780	300	- 830	- 850	- 1,680	- 1,380	- 600	AEGIJ
Total**	901,300	1,025,100	183,860	- 2,300	15,370	-73,130	-57,760	-60,060	123,800	

On an aggregate basis, employment is expected to grow less rapidly in the Southwest District than in the rest of the Nation. Overall, the District will not share equally in the growth anticipated Nationwide. This will not result from poor industrial mix. Rather, this less than favorable outlook for employment growth is primarily attributable to certain competitive disadvantages which the District shares with the Mid-Atlantic region. Key employment sectors which display substantial negative competitive effects include: government; services; finance, insurance, and real estate; electrical machinery; fabricated metals; primary metals; and food products.

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* Wage and salary employment and agricultural employment.
** Detail may not add due to rounding.

TABLE F. NORTHEASTERN DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

			Components of employment change **							
			Changes related to							
					Competitive effect					
Industry	Employment* 1965	Employment* 1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change	Performance code
Agriculture	6,100	4,200	1,240	- 3,260	420	- 300	120	- 3,140	- 1,900	CDFIK
Mining	8,800	4,100	1,800	- 3,430	- 1,970	- 1,100	- 3,070	- 6,500	- 4,700	CEGIK
Contract construction	9,800	13,600	2,000	540	1,970	- 710	1,260	1,800	3,800	ADFHJ
Trans., com. & p.u.	15,800	16,400	3,220	- 2,050	240	- 810	- 570	- 2,620	600	BDGIK
Trade	45,200	53,100	9,220	- 2,770	6,000	- 4,550	1,450	- 1,320	7,900	BDFIK
Finance, ins. & r.e.	7,800	8,700	1,590	80	- 250	- 520	- 770	- 690	900	AEGIJ
Services	36,500	49,100	7,450	4,570	3,120	- 2,540	580	5,150	12,600	ADFHK
Civilian government	34,900	44,100	7,120	9,720	- 5,620	- 2,020	- 7,640	2,080	9,200	AEGHK
Food products	7,500	6,800	1,530	- 1,560	- 450	- 220	- 670	- 2,230	- 700	CEGIK
Tobacco products	5,100	4,600	1,040	- 1,510	620	- 660	- 30	- 1,540	- 500	CDGIK
Textile products	9,900	8,100	2,020	- 2,440	- 1,030	- 350	- 1,380	- 3,820	- 1,800	CEGIK
Apparel & related	49,600	48,300	10,120	- 5,370	4,030	-10,080	- 6,050	-11,420	- 1,300	BDGIJ
Paper products	1,000	2,000	200	10	920	- 130	790	800	1,000	ADFHJ
Printing & publishing	4,900	7,600	1,000	- 160	2,300	- 440	1,860	1,700	2,700	BDFHJ
Chemical products	2,700	3,700	550	30	620	- 200	420	450	1,000	ADFHJ
Petroleum & related	100	400	20	- 30	310	0	310	280	300	CDFHJ
Rubber & plastics	2,700	4,100	550	380	610	- 140	470	850	1,400	ADFHJ
Leather products	5,900	5,400	1,200	- 1,300	- 360	- 40	- 400	- 1,700	- 500	CEGIK
Lumber, wood & furn.	3,600	4,200	730	- 620	630	- 140	490	- 130	600	BDFIK
Stone, clay & glass	1,600	2,200	330	- 180	460	- 10	450	270	600	BDFHJ
Primary metals	4,900	4,600	1,000	- 900	- 120	- 280	- 400	- 1,300	- 300	BEGIK
Fabricated metals	6,500	8,900	1,330	370	1,580	- 880	700	1,070	2,400	ADFHJ
Non-elec. machinery	4,200	6,600	860	210	2,080	- 750	1,330	1,540	2,400	ADFHJ
Electrical machinery	6,800	11,200	1,390	2,180	2,390	- 1,560	830	3,010	4,400	ADFHK
Transportation equip.	1,900	3,400	390	120	1,170	- 180	990	1,110	1,500	ADFHJ
Instruments	100	900	20	20	770	- 10	760	780	800	ADFHJ
Misc. manufacturing	5,400	6,800	1,100	420	1,090	- 1,210	- 120	300	1,400	ADGHK
Total**	289,300	333,100	59,020	- 6,940	21,580	-29,860	- 8,280	-15,220	43,800	

In summary, the rate of employment growth in the Northeast District will fall short of the expansion rate projected at the national level. Poor competitive position relative to other sections of the country coupled with a less than desirable industrial composition explain the kind of development that is forecast. Major contributors to net relative downward shifts in employment include apparel, textiles, mining and agriculture. A favorable sign in the District's development is the shift in economic orientation from old-line to new-line manufacturing industries as well as services and trade.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE G. NORTHWESTERN DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

Industry	Employment*		Components of employment change**						Total change	Performance code
			Changes related to							
					Competitive effect					
	1965	1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change		
Agriculture	10,100	7,500	2,060	- 5,400	1,240	- 500	740	- 4,660	- 2,600	CDFIK
Mining	1,800	1,400	370	- 700	160	- 230	- 70	- 770	- 400	CDGIK
Contract construction	7,100	8,700	1,450	390	280	- 520	- 240	150	1,600	ADGHK
Trans., com. & p.u.	15,100	16,300	3,080	- 1,960	850	- 770	80	- 1,880	1,200	BDFIK
Trade	37,500	43,300	7,650	- 2,300	4,220	- 3,770	450	- 1,850	5,800	BDFIK
Finance, ins. & r.e.	5,800	6,700	1,180	60	50	- 390	- 340	- 280	900	ADGIJ
Services	27,400	30,900	5,590	3,430	- 3,610	- 1,910	- 5,520	- 2,090	3,500	AEGIJ
Civilian government	26,700	33,500	5,450	7,430	- 4,530	- 1,550	- 6,080	1,350	6,800	AEGHK
Food products	4,000	3,600	820	- 830	- 260	- 120	- 390	- 1,220	- 400	CEGIK
Tobacco products	0	0	0	0	0	0	0	0	0	- - -
Textile products	100	100	20	- 20	0	0	0	- 20	0	CDFIK
Apparel & related	400	500	80	- 40	140	- 80	60	20	100	BDFHJ
Paper products	2,300	2,500	470	20	10	- 300	- 290	- 270	200	ADGIJ
Printing & publishing	2,200	2,500	450	- 70	120	- 200	- 80	- 150	300	BDGIJ
Chemical products	2,600	3,400	530	30	430	- 190	240	270	800	ADFHJ
Petroleum & related	1,300	1,200	260	- 390	60	- 30	30	- 360	- 100	CDFIK
Rubber & plastics	4,500	5,500	920	630	- 310	- 240	- 550	80	1,000	AEGHK
Leather products	400	300	80	- 90	- 90	0	- 90	- 180	- 100	CEGIJ
Lumber, wood & furn.	3,400	3,900	690	- 590	530	- 130	400	- 190	500	BDFIK
Stone, clay & glass	5,300	5,800	1,080	- 600	60	- 40	20	- 580	500	BDFIK
Primary metals	21,800	22,500	4,450	- 3,990	1,480	- 1,240	240	- 3,750	700	BDFIK
Fabricated metals	10,700	12,400	2,180	610	350	- 1,440	- 1,090	- 480	1,700	ADGIJ
Non-elec. machinery	14,700	16,100	3,000	740	300	- 2,640	- 2,340	- 1,600	1,400	ADGIJ
Electrical machinery	12,500	15,800	2,550	4,000	- 390	- 2,860	- 3,250	750	3,300	AEGHK
Transportation equip.	8,500	9,800	1,730	550	- 160	- 820	- 980	- 430	1,300	AEGIJ
Instruments	2,900	3,600	590	570	- 120	- 340	- 460	110	700	AEGHK
Misc. manufacturing	5,000	5,900	1,020	390	610	- 1,120	- 510	- 120	900	ADGIJ
Total**	234,100	263,700	47,750	1,850	1,430	-21,430	-20,000	-18,150	29,600	

The Northwest District exhibits an industrial composition heavily weighted by employment in national rapid growth sectors, but because of certain competitive disadvantages which tend to inhibit employment growth, the area is not expected to grow at national rates. This unfavorable development is evidenced by large negative competitive effects associated with government, services, electrical machinery, non-electrical machinery, and fabricated metals industries.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE H . CENTRAL SUSQUEHANNA BASIN DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

Industry	Employment*		Components of employment change**							
			Changes related to							
					Competitive effect					
	1965	1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change	Performance code
Agriculture	10,500	8,400	2,140	- 5,610	1,890	- 520	1,370	- 4,240	- 2,100	CDFIK
Mining	1,500	600	310	- 580	- 440	- 190	- 630	- 1,210	- 900	CEGIJ
Contract construction	6,700	9,200	1,370	370	1,250	- 490	760	1,130	2,500	ADFHJ
Trans., com. & p.u.	8,300	9,500	1,690	- 1,080	1,010	- 420	590	- 490	1,200	BDFIK
Trade	24,200	28,900	4,940	- 1,480	3,680	- 2,440	1,240	- 240	4,700	BDFIK
Finance, ins. & r.e.	3,300	4,000	670	30	220	- 220	0	30	700	ADFHK
Services	19,300	24,800	3,940	2,420	480	- 1,340	- 860	1,560	5,500	ADGHK
Civilian government	29,100	39,800	5,940	8,100	- 1,650	- 1,690	- 3,340	4,760	10,700	AEGHK
Food products	6,900	7,000	1,410	- 1,430	330	- 210	120	- 1,310	100	CDFIK
Tobacco products	1,000	1,000	200	- 300	230	- 130	100	- 200	0	CDFIK
Textile products	9,200	8,600	1,880	- 2,260	100	- 320	- 220	- 2,480	- 600	CDGIK
Apparel & related	13,000	12,900	2,650	- 1,410	1,300	- 2,640	- 1,340	- 2,750	- 100	BDGIK
Paper products	2,900	3,200	590	30	50	- 370	- 320	- 290	300	ADGIJ
Printing & publishing	1,800	2,000	370	- 60	50	- 160	- 110	- 170	200	BDGIJ
Chemical products	3,200	3,800	650	40	150	- 240	- 90	- 50	600	ADGIJ
Petroleum & related	100	100	20	- 30	10	0	10	- 20	0	CDFIK
Rubber & plastics	300	500	60	40	120	- 20	100	140	200	ADFHJ
Leather products	2,000	1,900	410	- 440	- 60	- 10	- 70	- 510	- 100	CEGIK
Lumber, wood & furn.	6,800	7,000	1,390	- 1,180	250	- 260	- 10	- 1,190	200	BDGIK
Stone, clay & glass	1,600	2,100	330	- 180	360	- 10	350	170	500	BDFHJ
Primary metals	4,700	5,300	960	- 860	770	- 270	500	- 360	600	BDFIK
Fabricated metals	3,800	4,700	780	220	410	- 510	- 100	120	900	ADGHK
Non-elec. machinery	2,600	3,700	530	130	910	- 470	440	570	1,100	ADFHJ
Electrical machinery	4,400	6,100	900	1,410	400	- 1,010	- 610	800	1,700	ADGHK
Transportation equip.	7,800	10,000	1,590	500	860	- 750	110	610	2,200	ADFHK
Instruments	1,700	2,200	350	340	10	- 200	- 190	150	500	ADGHK
Misc. manufacturing	900	900	180	70	- 50	- 200	- 250	- 180	0	AEGIJ
Total**	177,600	208,200	36,230	- 3,220	12,680	-15,090	- 2,410	- 5,630	30,600	

On an aggregate basis, employment in the Central Susquehanna Basin District is projected to grow more slowly than in the Nation as a whole. Heavy concentrations of employment in national slow growth and declining industries, accompanied by the District's poor competitive position in relation to other national sub-regions, is expected to have a weakening effect on the local economy. Key industries contributing to a reduction in the local share of national employment growth includes: agriculture; mining; apparel; textiles; food products; and lumber, wood, and furniture.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE I. TURNPIKE DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

			Components of employment change**							
			Changes related to							
					Competitive effect					
Industry	Employment* 1965	Employment* 1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change	Performance code
Agriculture	6,500	5,400	1,330	- 3,480	1,370	- 320	1,050	- 2,430	- 1,100	CDFIK
Mining	5,400	4,800	1,100	- 2,100	510	- 110	400	- 1,700	- 600	CDFIK
Contract construction	3,800	5,800	780	210	1,290	- 280	1,010	1,220	2,000	ADFHJ
Trans., com. & p.u.	16,200	15,300	3,300	- 2,110	- 1,260	- 830	- 2,090	- 4,200	- 900	BEGIK
Trade	22,900	25,200	4,670	- 1,400	1,330	- 2,300	- 970	- 2,370	2,300	BDGIK
Finance, ins. & r.e.	3,400	3,900	690	30	10	- 230	- 220	- 190	500	ADGIJ
Services	19,300	22,800	3,940	2,420	- 1,510	- 1,350	- 2,860	- 440	3,500	AEGIJ
Civilian government	19,000	25,200	3,880	5,290	- 1,650	- 1,320	- 2,970	2,320	6,200	AEGHK
Food products	3,600	3,200	730	- 750	- 270	- 110	- 380	- 1,130	- 400	CEGIK
Tobacco products	0	0	0	0	0	0	0	0	0	- - -
Textile products	1,600	1,700	330	- 390	220	- 60	160	- 230	100	CDFIK
Apparel & related	8,000	8,900	1,630	- 870	1,790	- 1,650	140	- 730	900	BDFIK
Paper products	2,400	2,800	490	20	200	- 310	- 110	- 90	400	ADGIJ
Printing & publishing	1,600	1,800	330	- 50	60	- 140	- 80	- 130	200	BDGIJ
Chemical products	200	200	40	0	- 30	- 10	- 40	- 40	0	AEGIJ
Petroleum & related	100	100	20	- 30	10	0	10	- 20	0	CDFIK
Rubber & plastics	300	500	60	40	120	- 20	100	140	200	ADFHJ
Leather products	3,200	3,500	650	- 700	370	- 20	350	- 350	300	CDFIK
Lumber, wood & furn.	1,400	1,700	290	- 240	300	- 50	250	10	300	BDFHJ
Stone, clay & glass	2,000	2,400	410	- 230	380	- 160	220	- 10	400	BDFIK
Primary metals	13,700	13,800	2,790	- 2,510	600	- 780	- 180	- 2,690	100	BDGIK
Fabricated metals	1,100	1,900	220	60	670	- 150	520	580	800	ADFHJ
Non-elec. machinery	2,700	2,400	550	140	- 510	- 480	- 990	- 850	- 300	AEGIJ
Electrical machinery	2,100	3,200	430	670	480	- 480	0	670	1,100	ADFHK
Transportation equip.	2,700	3,100	550	170	- 60	- 260	- 320	- 150	400	AEGIJ
Instruments	600	800	120	120	30	- 70	- 40	80	200	ADGHK
Misc. manufacturing	200	400	40	- 20	200	- 20	180	160	200	ADFHJ
Total**	144,000	160,800	29,370	- 5,710	4,650	-11,510	- 6,860	-12,570	16,800	

Despite the fact that industries in the Turnpike District are expected to perform well compared to the same industries in the Mid-Atlantic region, the overall rate of local employment growth is projected to fall short of the United States average. Substantial net relative downward shifts in employment in relation to the national growth standard will derive from an industrial composition that is unfavorable for long term growth as well as from large negative competitive effects. Industries displaying large negative shifts include : transportation, communications, and public utilities; primary metals; agriculture; trade; mining; and food products. Losses in some sectors may represent a transitional phase in the District's economy, but this cannot be ascertained.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE J . NORTH CENTRAL DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

			Components of employment change **							
			Changes related to							
					Competitive effect					
Industry	Employment* 1965	Employment* 1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change	Performance code
Agriculture	3,200	2,300	650	- 1,710	320	- 160	160	- 1,550	- 900	CDFIK
Mining	4,300	3,100	880	- 1,670	130	- 540	- 410	- 2,080	- 1,200	CDGIK
Contract construction	2,800	3,500	570	150	180	- 200	- 20	130	700	ADGHK
Trans., com. & p.u.	5,400	5,900	1,100	- 700	380	- 280	100	- 600	500	BDFIK
Trade	10,400	12,500	2,120	- 640	1,670	-1,050	620	- 20	2,100	BDFIK
Finance, ins. & r.e.	1,600	1,600	330	20	- 240	- 110	- 350	- 330	0	AEGIJ
Services	8,200	9,800	1,670	1,030	- 530	- 570	-1,100	- 70	1,600	AEGIJ
Civilian government	7,700	9,500	1,570	2,140	- 1,460	- 450	-1,910	230	1,800	AEGHK
Food products	900	900	180	- 190	40	- 30	10	- 180	0	CDFIK
Tobacco products	700	600	140	- 210	60	- 90	- 30	- 240	- 100	CDGIK
Textile products	400	500	80	- 100	130	- 10	120	20	100	CDFHJ
Apparel & related	2,000	2,000	410	- 220	220	- 410	- 190	- 410	0	BDGIK
Paper products	1,400	1,500	290	10	- 20	- 180	- 200	- 190	100	AEGIJ
Printing & publishing	600	600	120	- 20	- 50	- 50	- 100	- 120	0	BEGIJ
Chemical products	500	600	100	10	30	- 40	- 10	0	100	ADGHK
Petroleum & related	600	700	120	- 180	170	- 10	160	- 20	100	CDFIK
Rubber & plastics	0	0	0	0	0	0	0	0	0	- - -
Leather products	1,000	1,200	200	- 220	230	- 10	220	0	200	CDFHJ
Lumber, wood & furn.	1,600	2,000	330	- 280	410	- 60	350	70	400	BDFHJ
Stone, clay & glass	4,100	4,800	840	- 460	350	- 30	320	- 140	700	BDFIK
Primary metals	1,800	2,300	370	- 330	560	- 100	460	130	500	BDFHJ
Fabricated metals	2,300	2,800	470	130	210	- 310	- 100	30	500	ADGHK
Non-elec. machinery	1,100	1,600	220	60	420	- 200	220	280	500	ADFHJ
Electrical machinery	9,800	12,200	2,000	3,140	- 500	-2,240	-2,740	400	2,400	AEGHK
Transportation equip.	100	0	20	10	- 120	- 10	- 130	- 120	- 100	AEGIJ
Instruments	600	700	120	120	- 70	- 70	- 140	- 20	100	AEGIJ
Misc. manufacturing	500	800	100	40	270	- 110	160	200	300	ADFHJ
Total**	73,600	84,000	15,010	- 80	2,780	-7,310	-4,530	- 4,610	10,400	

Employment is expected to grow less rapidly in the North Central District than in the rest of the United States, despite an absolute gain of more than ten thousand jobs projected between 1965 and 1975. This less than favorable outlook for local employment growth in relation to the national growth standard is largely attributable to certain competitive disadvantages which tend to inhibit industrial expansion in the area. Principal employment sectors showing large negative competitive effects includes electrical machinery; government; and services. In the aggregate, the industrial mix factor is of little significance in explaining the net relative loss in jobs that is expected to occur.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE K . NORTHERN TIER DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1965 to 1975

	Employment*		Components of employment change**							
			Changes related to							
					Competitive effect					
Industry	1965	1975	National growth	Industrial mix effect	District relative to Mid-Atlantic	Mid-Atlantic relative to United States	Total competitive effect	Net relative change	Total change	Performance code
Agriculture	8,300	6,200	1,690	- 4,440	1,060	- 410	650	- 3,790	- 2,100	CDFIK
Mining	100	100	20	- 40	30	- 10	20	- 20	0	CDFIK
Contract construction	700	1,100	140	40	270	- 50	220	260	400	ADFHJ
Trans., com. & p.u.	2,300	2,400	470	- 300	50	- 120	- 70	- 370	100	BDGIK
Trade	4,700	5,800	960	- 290	900	- 470	430	140	1,100	BDFHJ
Finance, ins. & r.e.	500	700	100	10	120	- 30	90	100	200	ADFHJ
Services	4,800	5,800	980	600	- 240	- 340	- 580	20	1,000	AEGHK
Civilian government	6,500	8,800	1,330	1,810	- 460	- 380	- 840	970	2,300	AEGHK
Food products	800	800	160	- 170	30	- 20	10	- 160	0	CDFIK
Tobacco products	0	0	0	0	0	0	0	0	0	- - -
Textile products	200	100	40	- 50	- 80	- 10	- 90	- 140	- 100	CEGIJ
Apparel & related	1,800	2,400	370	- 200	800	- 370	430	230	600	BDFHJ
Paper products	200	1,800	40	0	1,590	- 30	1,560	1,560	1,600	ADFHJ
Printing & publishing	400	400	80	- 10	- 30	- 40	- 70	- 80	0	BEGIJ
Chemical products	0	0	0	0	0	0	0	0	0	- - -
Petroleum & related	0	0	0	0	0	0	0	0	0	- - -
Rubber & plastics	100	200	20	10	80	- 10	70	80	100	ADFHJ
Leather products	1,800	1,400	370	- 400	- 360	- 10	- 370	- 770	- 400	CEGIK
Lumber, wood & furn.	900	1,200	180	- 160	310	- 30	280	120	300	BDFHJ
Stone, clay & glass	500	500	100	- 60	- 40	0	- 40	- 100	0	BEGIK
Primary metals	1,400	2,200	290	- 260	850	- 80	770	510	800	BDFHJ
Fabricated metals	600	600	120	30	- 70	- 80	- 150	- 120	0	AEGIJ
Non-elec. machinery	1,800	2,100	370	90	160	- 320	- 160	- 70	300	ADGIJ
Electrical machinery	200	600	40	60	350	- 50	300	360	400	ADFHJ
Transportation equip.	700	1,100	140	40	290	- 70	220	260	400	ADFHJ
Instruments	0	100	0	0	100	0	100	100	100	ADFHJ
Misc. manufacturing	200	200	40	20	- 20	- 40	- 60	- 40	0	AEGIJ
Total**	39,500	46,600	8,060	- 3,630	5,640	-2,970	2,670	- 960	7,100	

Employment in the Northern Tier District is expected to expand at a relatively rapid rate despite the fact that the area's industrial structure is characterized as being unfavorable for long term growth. A large share of the growth projected locally will probably derive from paper products industries. The District also displays strong positive competitive effects in primary metals, apparel, electrical machinery, agriculture, and trade sectors.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE L. PERFORMANCE CODES USED IN CONJUNCTION WITH EMPLOYMENT SHIFT TABLES D THRU K.

Performance Code	Interpretation
ADFHJ	Performance expectations for the local area within this national rapid growth industry exceed Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively high level of performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the competitive effect is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
ADFHK	Performance expectations for the local area within this national rapid growth industry exceed Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively high level of performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
ADGHK	Performance expectations for the local area within this national rapid growth industry exceed Mid-Atlantic expectations, but fall short of national performance within the same industry. Compared with the national all-industry growth standard, a relatively high level of performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
ADGIJ	Performance expectations for the local area within this national rapid growth industry exceed Mid-Atlantic expectations, but fall short of national performance within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the competitive effect is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
AEGHK	Performance expectations for the local area within this national rapid growth industry fall short of Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively high level of performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
AEGIJ	Performance expectations for the local area within this national rapid growth industry fall short of Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the competitive effect is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
BDFHJ	Performance expectations for the local area within this national slow growth industry exceed Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively high level of performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the competitive effect is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
BDFIK	Performance expectations for the local area within this national slow growth industry exceed Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
BDGIJ	Performance expectations for the local area within this national slow growth industry exceed Mid-Atlantic expectations, but fall short of national performance within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the competitive effect is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.

TABLE L . (Continued)

Performance Code	Interpretation
BDGIK	Performance expectations for the local area within this national slow growth industry exceed Mid-Atlantic expectations, but fall short of national performance within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
BEGIJ	Performance expectations for the local area within this national slow growth industry fall short of Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the competitive effect is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
BEGIK	Performance expectations for the local area within this national slow growth industry fall short of Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
CDFHJ	Performance expectations for the local area within this national declining industry exceed Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively high level of performance within the industry is projected locally. Of the two major elements of change (industrial and competitive effect) the competitive effect is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
CDFIK	Performance expectations for the local area within this national declining industry exceed Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
CDGIJ	Performance expectations for the local area within this national declining industry exceed Mid-Atlantic expectations, but fall short of national performance within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the competitive effect is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.
CDGIK	Performance expectations for the local area within this national declining industry exceed Mid-Atlantic expectations, but fall short of national performance within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to all-industry growth nationally.
CEGIJ	Performance expectations for the local area within this national declining industry fall short of Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the competitive effect is more important in explaining the local area's performance within the industry relative to national all-industry growth.
CEGIK	Performance expectations for the local area within this national declining industry fall short of Mid-Atlantic and national expectations within the same industry. Compared with the national all-industry growth standard, a relatively poor performance within the industry is projected locally. Of the two major elements of change (industrial mix and competitive effect) the industrial mix component is more important in explaining the local area's overall performance within the industry relative to national all-industry growth.

TABLE M. APPALACHIA PENNSYLVANIA AND DISTRICTS - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

District	Employment*		Components of employment change**				
			Changes related to				
	1960	1965	Pennsylvania growth	Industrial mix effect	Competitive effect	Net relative change	Total change
Southwestern	875,500	901,300	63,050	- 3,920	- 33,330	- 37,250	25,800
Northeastern	273,600	289,300	19,710	- 3,170	- 840	- 4,010	15,700
Northwestern	217,400	234,100	15,650	1,150	- 100	1,050	16,700
Central Susquehanna	160,200	177,600	11,550	- 1,150	7,000	5,850	17,400
Turnpike	137,400	144,000	9,890	- 2,710	- 570	- 3,280	6,600
North Central	71,500	73,600	5,150	- 2,810	- 240	- 3,050	2,100
Northern Tier	37,900	39,500	2,730	- 1,190	60	- 1,130	1,600
Appalachia Pennsylvania	1,773,500	1,859,400	127,700	- 13,790	- 28,010	- 41,800	85,900
Non-Appalachia Pennsylvania	1,926,400	2,106,800	138,600	13,790	28,010	41,800	180,400
Pennsylvania	3,699,900	3,966,200	266,300	0	0	0	266,300

Large negative competitive effects coupled with an adverse mix of industries have resulted in Appalachia Pennsylvania's poor record of performance in relation to the growth experienced by the rest of the State during the 1960 to 1965 period. The Southwest District has apparently contributed most to Appalachia Pennsylvania's net relative downward shifts in employment. Upward shifts from Statewide norms were exhibited by the Central Susquehanna Basin and Northwest Districts. Adverse mix effects were evident in all Appalachian District except the Northwest.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE N. APPALACHIA PENNSYLVANIA - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

Industry	Employment* 1960	Employment* 1965	Components of employment change ** — Changes related to — Pennsylvania growth	Industrial mix effect	Competitive effect	Net relative change	Total change
Agriculture	67,700	60,000	4,870	- 12,440	- 130	- 12,570	- 7,700
Mining	53,300	39,600	3,840	- 16,930	- 610	- 17,540	-13,700
Contract construction	66,400	73,000	4,780	1,270	550	1,820	6,600
Trans., com. & p.u.	137,700	126,800	9,910	- 17,140	- 3,670	- 20,810	-10,900
Trade	310,300	320,300	22,340	20,420	-32,760	- 12,340	10,000
Finance, ins. & r.e.	56,400	58,400	4,060	- 320	- 1,740	- 2,060	2,000
Services	231,300	256,800	16,650	15,360	- 6,510	8,850	25,500
Civilian government	192,200	230,000	13,840	18,800	5,160	23,960	37,800
Food products	46,200	44,200	3,330	- 4,210	- 1,120	- 5,330	- 2,000
Tobacco products	5,800	6,800	420	- 1,540	2,120	580	1,000
Textile products	20,800	21,900	1,500	- 3,010	2,610	- 400	1,100
Apparel & related	69,900	80,700	5,030	750	5,020	5,770	10,800
Paper products	13,600	14,000	980	- 200	- 380	- 580	400
Printing & publishing	20,500	20,200	1,480	- 1,480	- 300	- 1,780	- 300
Chemical products	15,700	15,600	1,130	- 1,250	20	- 1,230	- 100
Petroleum & related	4,100	4,200	300	- 690	490	- 200	100
Rubber & plastics	8,500	11,700	610	1,870	720	2,590	3,200
Leather products	14,600	14,600	1,050	- 1,690	640	- 1,050	0
Lumber, wood & furn.	18,400	22,200	1,320	1,030	1,450	2,480	3,800
Stone, clay & glass	42,900	39,900	3,090	- 5,250	- 840	- 6,090	- 3,000
Primary metals	170,000	172,500	12,240	- 7,430	- 2,310	- 9,740	2,500
Fabricated metals	56,900	53,200	4,100	- 6,480	- 1,320	- 7,800	- 3,700
Non-elec. machinery	39,100	48,300	2,820	3,100	3,280	6,380	9,200
Electrical machinery	61,200	63,000	4,410	- 3,920	1,310	- 2,610	1,800
Transportation equip.	29,100	34,000	2,100	2,450	350	2,800	4,900
Instruments	8,400	11,500	600	1,760	740	2,500	3,100
Misc. manufacturing	12,500	16,000	900	3,380	- 780	2,600	3,500
Total**	1,773,500	1,859,400	127,700	- 13,790	-28,010	- 41,800	85,900

Most of Appalachia Pennsylvania's growth derived from industry categories that exhibited rapid growth characteristics Statewide. Yet, the overall rate of employment growth in Appalachia Pennsylvania was substantially less than the expansion rate for the non-Appalachian portion of the State. Poor competitive position and an adverse mix of industries combined to hold back growth within the Appalachian portion of the State. Of particular significance are the large negative competitive effects associated with the trade and services sectors. Failure of these employment categories to grow at a satisfactory rate reflects in part a slowly expanding population, low levels of family income, and lack of urbanization in many sections of Appalachia Pennsylvania.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE 0. SOUTHWESTERN DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

Industry	Employment*		Components of employment change**				
			Changes related to				
	1960	1965	Pennsylvania growth	Industrial mix effect	Competitive effect	Net relative change	Total change
Agriculture	17,200	15,300	1,240	- 3,160	20	- 3,140	- 1,900
Mining	22,700	17,700	1,630	- 7,210	580	- 6,630	- 5,000
Contract construction	41,500	42,100	2,990	800	- 3,190	- 2,390	600
Trans., com. & p.u.	69,100	63,700	4,980	- 8,600	- 1,780	- 10,380	- 5,400
Trade	171,500	175,400	12,350	11,280	- 19,730	- 8,450	3,900
Finance, ins. & r.e.	34,800	36,000	2,510	- 190	- 1,120	- 1,310	1,200
Services	125,900	141,300	9,060	8,360	- 2,020	6,340	15,400
Civilian government	87,600	106,100	6,310	8,570	3,620	12,190	18,500
Food products	22,600	20,500	1,630	- 2,060	- 1,670	- 3,730	- 2,100
Tobacco products	0	0	0	0	0	0	0
Textile products	300	500	20	- 40	220	180	200
Apparel & related	4,200	5,900	300	40	1,360	1,400	1,700
Paper products	3,300	3,800	240	- 50	310	260	500
Printing & publishing	10,400	8,700	750	- 750	- 1,700	- 2,450	- 1,700
Chemical products	7,200	6,400	520	- 580	- 740	- 1,320	- 800
Petroleum & related	1,600	2,000	120	- 270	550	280	400
Rubber & plastics	2,600	3,800	190	570	440	1,010	1,200
Leather products	100	300	10	- 10	200	190	200
Lumber, wood & furn.	3,600	4,500	260	200	440	640	900
Stone, clay & glass	25,900	24,800	1,860	- 3,170	210	- 2,960	- 1,100
Primary metals	126,000	124,200	9,070	- 5,510	- 5,360	- 10,870	- 1,800
Fabricated metals	35,200	28,200	2,530	- 4,010	- 5,520	- 9,530	- 7,000
Non-elec. machinery	14,800	21,200	1,070	1,170	4,160	5,330	6,400
Electrical machinery	30,000	27,200	2,160	- 1,920	- 3,040	- 4,960	- 2,800
Transportation equip.	9,600	12,300	690	810	1,200	2,010	2,700
Instruments	5,000	5,600	360	1,050	- 810	240	600
Misc. manufacturing	2,800	3,800	200	760	40	800	1,000
Total**	875,500	901,300	63,050	- 3,920	- 33,330	- 37,250	25,800

Employment growth in the Southwest District fell far short of the pace set by the State as a whole. The overall employment effect of this poor performance was 37,250 fewer jobs than would have been realized had the District shared equally in Pennsylvania's growth. Losses due to competitive effects were nearly nine times as great as losses stemming from an adverse mix of industries. The trade and metals industries contributed most to the District's large negative competitive effect.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE P. NORTHEASTERN DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

Industry	Employment* 1960	Employment* 1965	Components of employment change** Changes related to Pennsylvania growth	Changes related to Industrial mix effect	Changes related to Competitive effect	Net relative change	Total change
Agriculture	7,800	6,100	560	- 1,430	- 830	- 2,260	- 1,700
Mining	13,500	8,800	970	- 4,290	- 1,380	- 5,670	- 4,700
Contract construction	8,100	9,800	580	160	960	1,120	1,700
Trans., com. & p.u.	18,300	15,800	1,320	- 2,280	- 1,540	- 3,820	- 2,500
Trade	44,300	45,200	3,190	2,910	- 5,200	- 2,290	900
Finance, ins. & r.e.	7,500	7,800	540	- 40	- 200	- 240	300
Services	33,700	36,500	2,430	2,240	- 1,870	370	2,800
Civilian government	31,000	34,900	2,230	3,030	- 1,360	1,670	3,900
Food products	7,700	7,500	550	- 700	- 50	- 750	- 200
Tobacco products	4,400	5,100	320	- 1,170	1,550	380	700
Textile products	10,100	9,900	730	- 1,460	530	- 930	- 200
Apparel & related	43,500	49,600	3,130	470	2,500	2,970	6,100
Paper products	1,000	1,000	70	- 10	- 60	- 70	0
Printing & publishing	4,400	4,900	320	- 320	500	180	500
Chemical products	1,700	2,700	120	- 140	1,020	880	1,000
Petroleum & related	100	100	10	- 20	10	- 10	0
Rubber & plastics	1,900	2,700	140	420	240	660	800
Leather products	6,600	5,900	480	- 760	- 420	- 1,180	- 700
Lumber, wood & furn.	2,300	3,600	170	130	1,000	1,130	1,300
Stone, clay & glass	1,100	1,600	80	- 130	550	420	500
Primary metals	5,100	4,900	370	- 220	- 350	- 570	- 200
Fabricated metals	5,200	6,500	370	- 590	1,520	930	1,300
Non-elec. machinery	3,700	4,200	270	290	- 60	230	500
Electrical machinery	5,300	6,800	380	- 340	1,460	1,120	1,500
Transportation equip.	1,900	1,900	140	160	- 300	- 140	0
Instruments	0	100	0	0	100	100	100
Misc. manufacturing	3,400	5,400	240	920	840	1,760	2,000
Total**	273,600	289,300	19,710	- 3,170	- 840	- 4,010	15,700

The Northeast District's below average performance in relation to the Statewide norm is attributable largely to a less than desirable mix of industries, with heavy concentrations of employment in industries that had grown slowly or declined no matter where they were located in Pennsylvania. Major contributors to negative mix effects include mining, transportation, textiles, agriculture, and tobacco. A part of the District's employment lag was due to industries in the District growing more slowly than the same industries located in other regions of the State. Most notable among these were the non-commodity producing industries.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE Q. NORTHWESTERN DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

			Components of employment change**				
			Changes related to				
	Employment*						
Industry	1960	1965	Pennsylvania growth	Industrial mix effect	Competitive effect	Net relative change	Total change
Agriculture	11,800	10,100	850	- 2,170	- 380	- 2,550	- 1,700
Mining	2,000	1,800	140	- 640	300	- 340	- 200
Contract construction	5,800	7,100	420	110	770	880	1,300
Trans., com. & p.u.	15,700	15,100	1,130	- 1,950	220	- 1,730	- 600
Trade	33,500	37,500	2,410	2,200	- 610	1,590	4,000
Finance, ins. & r.e.	5,600	5,800	400	- 30	- 170	- 200	200
Services	25,700	27,400	1,850	1,710	- 1,860	- 150	1,700
Civilian government	22,900	26,700	1,650	2,240	- 90	2,150	3,800
Food products	4,400	4,000	320	- 400	- 320	- 720	- 400
Tobacco products	0	0	0	0	0	0	0
Textile products	100	100	10	- 10	0	- 10	0
Apparel & related	400	400	30	0	- 30	- 30	0
Paper products	2,400	2,300	170	- 40	- 230	- 270	- 100
Printing & publishing	2,100	2,200	150	- 150	100	- 50	100
Chemical products	2,000	2,600	140	- 160	620	460	600
Petroleum & related	1,700	1,300	120	- 280	- 240	- 520	- 400
Rubber & plastics	3,700	4,500	270	810	- 280	530	800
Leather products	800	400	60	- 90	- 370	- 460	- 400
Lumber, wood & furn.	3,400	3,400	240	190	- 430	- 240	0
Stone, clay & glass	5,500	5,300	400	- 670	70	- 600	- 200
Primary metals	19,800	21,800	1,430	- 870	1,440	570	2,000
Fabricated metals	9,700	10,700	700	- 1,100	1,400	300	1,000
Non-elec. machinery	14,400	14,700	1,040	1,140	- 1,880	- 740	300
Electrical machinery	12,000	12,500	860	- 770	410	- 360	500
Transportation equip.	5,700	8,500	410	480	1,910	2,390	2,800
Instruments	1,800	2,900	130	380	590	970	1,100
Misc. manufacturing	4,500	5,000	320	1,220	- 1,040	180	500
Total**	217,400	234,100	15,650	1,150	- 100	1,050	16,700

The Northwest District outperformed the rest of the State in terms of overall employment growth. A major reason for the District's better than average performance was the concentration of industries that exhibit rapid growth characteristics Statewide, such as government, trade, and services. Another reason was the District's ability to compete effectively with other sections of the State in several important industries including metals, electrical machinery, and transportation services and equipment.

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* Wage and salary employment and agricultural employment.
** Detail may not add due to rounding.

TABLE R. CENTRAL SUSQUEHANNA BASIN DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

Industry	Employment*		Components of employment change**				
			Changes related to				
	1960	1965	Pennsylvania growth	Industrial mix effect	Competitive effect	Net relative change	Total change
Agriculture	11,500	10,500	830	- 2,110	280	- 1,830	- 1,000
Mining	2,800	1,500	200	- 890	- 610	- 1,500	- 1,300
Contract construction	5,100	6,700	370	100	1,130	1,230	1,600
Trans., com. & p.u.	8,500	8,300	610	- 1,060	250	- 810	- 200
Trade	22,500	24,200	1,620	1,480	- 1,400	80	1,700
Finance, ins. & r.e.	3,100	3,300	220	- 20	0	- 20	200
Services	16,700	19,300	1,200	1,110	290	1,400	2,600
Civilian government	22,300	29,100	1,610	2,180	3,010	5,190	6,800
Food products	6,000	6,900	430	- 550	1,020	470	900
Tobacco products	1,000	1,000	70	- 270	200	- 70	0
Textile products	8,000	9,200	580	- 1,160	1,780	620	1,200
Apparel & related	12,200	13,000	880	130	- 210	- 80	800
Paper products	2,600	2,900	190	- 40	150	110	300
Printing & publishing	1,400	1,800	100	- 100	400	300	400
Chemical products	4,200	3,200	300	- 340	- 960	- 1,300	- 1,000
Petroleum & related	0	100	0	0	100	100	100
Rubber & plastics	100	300	10	20	170	190	200
Leather products	2,000	2,000	140	- 230	90	- 140	0
Lumber, wood & furn.	5,500	6,800	400	310	590	900	1,300
Stone, clay & glass	2,000	1,600	140	- 240	- 300	- 540	- 400
Primary metals	4,000	4,700	290	- 170	580	410	700
Fabricated metals	3,600	3,800	260	- 410	350	- 60	200
Non-elec. machinery	2,300	2,600	170	180	- 50	130	300
Electrical machinery	3,000	4,400	220	- 190	1,370	1,180	1,400
Transportation equip.	8,000	7,800	580	670	- 1,450	- 780	- 200
Instruments	600	1,700	40	130	930	1,060	1,100
Misc. manufacturing	1,200	900	90	320	- 710	- 390	- 300
Total**	160,200	177,600	11,550	- 1,150	7,000	5,850	17,400

The Central Susquehanna Basin District was among the fastest growing regions of the State during the five-year period. Despite heavy concentrations of employment in industries that grew slowly or declined at the State level, gains in competitive effects were sufficient to more than offset the disadvantages of an adverse mix of industries. Major contributors to positive competitive effects included government, textiles, electrical machinery, construction, and food products industries.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE S . TURNPIKE DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

			Components of employment change**				
			Changes related to				
Industry	Employment* 1960	Employment* 1965	Pennsylvania growth	Industrial mix effect	Competitive effect	Net relative change	Total change
Agriculture	6,900	6,500	500	- 1,270	370	- 900	- 400
Mining	6,600	5,400	480	- 2,100	420	- 1,680	- 1,200
Contract construction	3,500	3,800	250	70	- 20	50	300
Trans., com. & p.u.	18,200	16,200	1,310	- 2,270	- 1,040	- 3,310	- 2,000
Trade	23,500	22,900	1,690	1,550	- 3,840	- 2,290	- 600
Finance, ins. & r.e.	3,300	3,400	240	- 20	- 120	- 140	100
Services	17,300	19,300	1,250	1,150	- 390	760	2,000
Civilian government	16,100	19,000	1,160	1,580	170	1,740	2,900
Food products	3,800	3,600	270	- 350	- 130	- 470	- 200
Tobacco products	0	0	0	0	0	0	0
Textile products	1,300	1,600	90	- 190	400	210	300
Apparel & related	6,700	8,000	480	70	750	820	1,300
Paper products	2,500	2,400	180	- 40	- 240	- 280	- 100
Printing & publishing	1,200	1,600	90	- 90	400	310	400
Chemical products	100	200	10	- 10	100	90	100
Petroleum & related	0	100	0	0	100	100	100
Rubber & plastics	0	300	0	0	300	300	300
Leather products	2,300	3,200	170	- 270	1,000	740	900
Lumber, wood & furn.	1,200	1,400	90	70	50	110	200
Stone, clay & glass	2,800	2,000	200	- 340	- 660	- 1,000	- 800
Primary metals	12,700	13,700	910	- 560	640	90	1,000
Fabricated metals	1,000	1,100	70	- 110	140	30	100
Non-elec. machinery	1,000	2,700	70	80	1,550	1,630	1,700
Electrical machinery	1,200	2,100	90	- 80	900	820	900
Transportation equip.	3,800	2,700	270	320	- 1,690	- 1,370	- 1,100
Instruments	400	600	30	80	90	170	200
Misc. manufacturing	0	200	0	0	200	200	200
Total**	137,400	144,000	9,890	- 2,710	- 570	- 3,280	6,600

Employment in the Turnpike District grew more slowly than in the State as a whole, despite an absolute gain of some 6,600 employment opportunities. Heavy concentrations of employment in declining industries such as agriculture, mining, and transportation coupled with large negative competitive effects in trade as well as in transportation and related industries have held back employment growth within the District.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE T . NORTH CENTRAL DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

Industry	Employment*		Components of employment change**				
			Changes related to				
	1960	1965	Pennsylvania growth	Industrial mix effect	Competitive effect	Net relative change	Total change
Agriculture	3,600	3,200	260	- 660	0	- 660	- 400
Mining	5,600	4,300	400	- 1,780	80	- 1,700	- 1,300
Contract construction	2,100	2,800	150	40	510	550	700
Trans., com. & p.u.	5,500	5,400	400	- 690	190	- 500	- 100
Trade	10,300	10,400	740	680	- 1,320	- 640	100
Finance, ins. & r.e.	1,600	1,600	120	- 10	- 110	- 120	0
Services	7,500	8,200	540	500	- 340	160	700
Civilian government	7,100	7,700	510	690	- 600	90	600
Food products	900	900	60	- 80	20	- 60	0
Tobacco products	400	700	30	- 110	380	270	300
Textile products	400	400	30	- 60	30	- 30	0
Apparel & related	1,700	2,000	120	20	160	180	300
Paper products	1,500	1,400	110	- 20	- 190	- 210	- 100
Printing & publishing	700	600	50	- 50	- 100	- 150	- 100
Chemical products	500	500	40	- 40	0	- 40	0
Petroleum & related	700	600	50	- 120	- 30	- 150	- 100
Rubber & plastics	200	0	10	40	- 250	- 210	- 200
Leather products	900	1,000	60	- 100	140	40	100
Lumber, wood & furn.	1,500	1,600	110	80	- 90	- 10	100
Stone, clay & glass	5,000	4,100	360	- 610	- 650	- 1,260	- 900
Primary metals	1,000	1,800	70	- 40	770	730	800
Fabricated metals	1,800	2,300	130	- 210	580	370	500
Non-elec. machinery	1,100	1,100	80	90	- 170	- 80	0
Electrical machinery	9,000	9,800	650	- 580	730	150	800
Transportation equip.	0	100	0	0	100	100	100
Instruments	500	600	40	100	- 40	60	100
Misc. manufacturing	400	500	30	110	- 40	70	100
Total**	71,500	73,600	5,150	- 2,810	- 240	- 3,050	2,100

Despite an absolute gain of 2,100 jobs, employment growth in the North Central District fell short of the pace set by the rest of the State. Industries displaying large negative shifts in employment from Statewide norms include mining and stone, clay and glass. Overall, the industrial mix effect is more important than the competitive effect in explaining the District's past performance.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

TABLE U . NORTHERN TIER DISTRICT - EMPLOYMENT AND COMPONENTS OF EMPLOYMENT CHANGE, 1960 to 1965

	Employment*		Components of employment change**				
			Changes related to				
Industry	1960	1965	Pennsylvania growth	Industrial mix effect	Competitive effect	Net relative change	Total change
Agriculture	8,900	8,300	640	- 1,640	400	- 1,240	- 600
Mining	100	100	10	- 30	20	- 10	0
Contract construction	300	700	20	10	370	380	400
Trans., com. & p.u.	2,400	2,300	170	- 300	30	- 270	- 100
Trade	4,700	4,700	340	310	- 650	- 340	0
Finance, ins. & r.e.	500	500	40	0	- 30	- 40	0
Services	4,500	4,800	320	300	- 320	- 20	300
Civilian government	5,200	6,500	370	510	420	930	1,300
Food products	800	800	60	- 70	20	- 60	0
Tobacco products	0	0	0	0	0	0	0
Textile products	600	200	40	- 90	- 360	- 440	- 400
Apparel & related	1,200	1,800	80	10	500	510	600
Paper products	300	200	20	0	- 120	- 120	- 100
Printing & publishing	300	400	20	- 20	100	80	100
Chemical products	0	0	0	0	0	0	0
Petroleum & related	0	0	0	0	0	0	0
Rubber & plastics	0	100	0	0	100	100	100
Leather products	1,900	1,800	140	- 220	- 20	- 240	- 100
Lumber, wood & furn.	900	900	60	50	- 120	- 60	0
Stone, clay & glass	600	500	40	- 70	- 70	- 140	- 100
Primary metals	1,400	1,400	100	- 60	- 40	- 100	0
Fabricated metals	400	600	30	- 50	220	170	200
Non-elec. machinery	1,800	1,800	130	140	- 270	- 130	0
Electrical machinery	700	200	50	- 40	- 500	- 550	- 500
Transportation equip.	100	700	10	10	580	590	600
Instruments	100	0	10	20	- 130	- 110	- 100
Misc. manufacturing	200	200	10	50	- 70	- 10	0
Total**	37,900	39,500	2,730	- 1,190	60	- 1,130	1,600

The most significant factor in the District's development has been the disproportionate amount of employment in agriculture and the slow pace of industrialization. This is reflected by the overall employment lag of the District in relation to Statewide norms and by the large negative industrial mix effects which have tended to hold back employment growth.

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* Wage and salary employment and agricultural employment.

** Detail may not add due to rounding.

APPENDIX D

PREPARATION OF

PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

Diary of Events
1968

Feb. 8: An initial meeting of the State Planning Board staff was held to discuss the preparation of the Pennsylvania Appalachian Development Plan.

Feb. 13: The State Planning Board staff conferred with Dr. Monroe Newman of the Appalachian Regional Commission staff to review Plan requirements and contents.

Feb. 16: A meeting was held in Harrisburg of representatives (officials and staff) of the Local Development Districts to distribute and discuss the "Guidelines for Preparing the Pennsylvania Appalachian Development Plan - Work Items)" prepared by the State Planning Board staff for use by the Districts in providing information for the Plan. In the "Guidelines," each Local Development District was requested to:

1. Examine economic, social, and environmental conditions and objectives;
2. Identify development problems and deficiencies;
3. Evaluate the development potential, given the existing resource base;
4. Propose a development strategy;
5. Prepare a list of projects for development.

Feb. 23: The State Planning Board staff began to obtain planning, program, and project information from State functional agencies whose programs are involved with the Appalachian program. This task was completed in March.

Feb.-Apr.: The Local Development Districts compiled information as specified by the "Guidelines." Teams which included staff of the State Planning Board and the Department of Commerce made field trips to guide and assist the Districts. This field work was completed in April. The Local Development Districts prepared and submitted reports to the State Planning Board staff.

Mar. 14: The State Planning Board reviewed the progress of the Plan preparation efforts at its regular meeting.

Apr.-Aug.: The State Planning Board staff analyzed the material submitted by the Local Development Districts, and collected other data needed for the Plan report. Analysis sheets and tables were prepared to summarize the data for the Plan report writer.

Apr.-Aug.: Using criteria established by the State Planning Board staff, the Local Development Districts identified and delineated Economic Activity Centers and Economic Activity Areas (the urban centers and the rural hinterlands). The State Planning Board staff reviewed and refined these Centers and Areas, and prepared a composite map.

Apr.-Oct.: The Plan report was written by a staff member of the State Planning Board.

May-Aug.: The State Planning Board staff drafted charts and maps for the Plan report.

May 16: The State Planning Board reviewed the progress of the Plan preparation efforts at its regular meeting.

May 29: The Executive Director of the State Planning Board met with the Secretary of Commerce to establish the policies and content of the Plan report.

June 3: The State Planning Board staff met with Mr. Ralph R. Widner and Dr. Monroe Newman of the Appalachian Regional Commission staff to review the basic concepts of the Plan report.

June 5: The Department of Commerce Industrial Development Field Representatives met with the State Planning Board staff to review the projects recommended by the Local Development Districts and to provide additional information about them.

June 26: The State Planning Board staff met with the Director, Bureau of State and Federal Economic Aid, Department of Commerce, to review program policies and projects.

June 27: A staff member of the State Planning Board met with the Appalachian Project Coordinator to review projects to be recommended in the Plan report.

July 3: The Secretary of Commerce met with State Planning Board staff members to agree upon the Pennsylvania planning and development policies for Appalachia and the projects to be recommended in the Plan report.

July 11: The State Planning Board reviewed and approved the Pennsylvania planning and development policies for Appalachia and the projects to be recommended in the Plan report.

APPENDIX E

GUIDELINES FOR PREPARING THE PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

(WORK ITEMS)

I. Examination of Economic, Social and Environmental Conditions - based on the opinions, judgments and observations of persons in the area who have intimate knowledge of the local situation, assess the economic, social, and environmental conditions of the District and each of the District sub-areas.

A. An analysis of economic, social and environmental conditions begins with a determination of whether the District and its sub-areas are achieving certain desirable objectives. To make this determination, it will be necessary to test the performance of the local economy and the current level of economic and social achievement against a set of acceptable standards. National norms are frequently used for this purpose and, as an illustration, tests which compare District unemployment rates and levels of per capita income with national averages may provide useful indicators of local accomplishments relative to the United States as a whole. Other standards based on State or regional performance may be preferred, but the decision to use one frame of reference rather than another will depend on the type of variable that is being tested. Some factors can be easily subjected to quantitative analysis, but in most instances it will be necessary to make judgment evaluations. The District, for example, must decide for itself what it hopes to accomplish in the area of education, and must assess the effectiveness of existing educational programs accordingly.

B. Certain desirable characteristics are generally regarded as objectives toward which development efforts ought to be focused, and therefore can provide a basic framework for evaluating economic, social and environmental conditions of an area. The following objectives may provide good reference points around which an examination of the economic system can be structured.

1. Economic Development Objectives

    a. An economic growth momentum capable of supporting an ever increasing population and sufficient to absorb new entrants to the work force.

    b. A well diversified economic base to insure long-term growth and economic stability.

    c. A desirable industrial mix; that is, employment heavily concentrated in rapid growth, high wage paying manufacturing and non-manufacturing industries.

    d. A high level of economic performance in national growth industries.

    e. High levels of worker productivity and plant efficiency to guarantee maximum production and high earnings per production employee.

    f. Highly developed infrastructure (such as highways and utilities) and services to support economic development.

    g. Optimal utilization of the resource base, including manpower resources, natural resources and investment capital. Is the area making the best use of existing or potentially exploitable resources in order to accomplish development objectives?

2. Social Objectives

   a. High levels of per capita income.
   b. Full employment - a balance between jobs and people.
   c. Elimination of poverty and improvement of the minority group status.
   d. Basic education available to all and a high level of educational attainment.
   e. Maximization of earning power per worker (implications for vocational training and retraining).
   f. Wide range of choice of economic opportunities for individuals.
   g. High standards of living.
   h. Adequate health services and maintenance of satisfactory health standards.

3. Environmental Objectives

   a. Pleasant environmental conditions.
   b. Good housing available for all groups.
   c. Adequate community facilities and services.
   d. Absence of air and water pollution.

II. Identification of Development Problems and Deficiencies - based on the foregoing examination, identify major problems and deficiencies, emphasizing current or anticipated obstacles to future growth and development in each District sub-area.

A. Identify the economic, social, and environmental problems in the District and in each of its sub-areas which impede growth and development.

B. Since low levels of economic performance and welfare achievement may, in many instances, be regarded as symptoms rather than causes of District development problems, the underlying reasons for poor performance should be investigated and identified. For example, why is the level of per capita income in the District far below the national average?

C. Single out those problems which can be handled most effectively at the District or multi-county level as distinguished from those problems that can be best resolved locally. For example, identify problems that can be corrected only through the coordinated efforts (financial and otherwise) of several county or municipal governments.

III. Evaluate the Development Potential of the District and its sub-areas, given the existing resource base.

A. Itemize District attributes and deficiencies and identify relative advantages and disadvantages in resources (such as manpower, community facilities, raw materials, geographic location, transportation, developable land, and investment capital) in relation to other areas with which the District must compete for new growth and economic activity. Describe District advantages that tend to attract people, industry, and investment capital to the area as well as disadvantages that tend to repel people, industries, and investment capital from the area.

B. Identify serious environmental problems that tend to decrease the District's attractiveness as a place to live and work. (For example, mine area problems such as mine fires, mine subsidence, air and water pollution, and sub-standard housing.)

C. Identify deficiencies with respect to community facilities such as hospitals, access roads, water supply and distribution, sewage treatment plants and collector systems, vocational-technical education facilities, higher education facilities, libraries, and airports.

D. What are the alternatives for regional development given the existing resource base and the competitive advantages and disadvantages described above? Identify potentials for economic, social, and environmental development and specify development opportunities which will capitalize on the existing resources, help to solve problems, and achieve development potentials.

E. Review and evaluate the State Planning Board projections of industry employment and comment in some detail on the District's capability for supporting the kind of development indicated by the projections. Consider factors such as existing capacity of industrial plant and facilities, human resources and raw materials, land suitable for industrial development, supply of investment capital, transportation and warehousing facilities and market characteristics.

F. Modify projected employment figures where necessary so that they more nearly reflect what realistically can be expected by 1975.

G. Based on the above evaluation of the industrial (manufacturing and non-manufacturing) environment, describe the economic trends expected to occur during the next five or ten years. To what extent is industrial readjustment expected to affect the local economy? For example, if one anticipates a major reduction in steel employment in the District accompanied by an increase in textile and apparel employment, what kind of impact is this likely to have on the District's economy with respect to employment opportunities, levels of income and occupational composition. How would other sectors of the economy be affected by this shift in industrial activity? What kinds of problems should the District be prepared to face as a result of changes in the industrial structure?

H. Identify industrial development opportunities and suggest alternatives for stimulating growth in desirable types of industry through public investment programs and projects. (It is suggested that this information be obtained from industrial development agencies and leading businessmen in the area who have broad knowledge of industrial activities and requirements.) What are the major constraints to the achievement of satisfactory growth rates for individual industries? To what economic sectors should growth stimulants be applied, and how can public investment capital be used most effectively to accomplish this objective? (For example, manpower training, management consulting services, industrial park development, improvements in community facilities and other amenity resources, improved water supply and sewage treatment systems, and exploitation of unused or under-utilized natural resources.)

I. In collaboration between the State Planning Board and the District, prepare target projections of employment and population based on District objectives concerning migration and industrial development efforts. How many additional employment opportunities will be required to reduce out-migration, and what industries can be counted on to provide this additional growth?

J. Relate the projected changes in employment and population to specific projects and facilities (existing and proposed) needed to serve the people in the District sub-area by using program standards.

IV. Propose a development strategy for the District that has as its primary objectives the reduction of growth impediments and the maximization of development potential.

A. Specify development goals for the District and its sub-areas. Goals should be closely related to the solution of problems and the realization of potentials specified above, and should have a high probability of being achieved through the application of public investment programs.

B. Prepare a statement of development strategy for the District and its sub-areas. Include a statement of specific long-range public and private investment program plans to help develop potentials and to solve problems.

C. Based on the evaluation of the District economy, what kind of Federal, State and local government action is thought to be necessary to: (1) alter unfavorable development trends; and/or (2) insure the continuance of desirable development trends?

D. What kinds of development programs - Federal, State and local - is the District especially willing to support philosophically and financially, such as highways, housing, industrial promotion, health, and education. Rank programs in terms of their priorities.

V. Prepare a list of investment projects for development which best serves the people while promoting growth with the greatest dollar return.

A. Prepare a list of projects for each of the District's sub-areas.

A priority should be assigned to each project in accordance with the established development goals. Provide information for each project concerning its status, location, type, benefits to be derived, estimated costs, sources of funding, and estimated completion date. Relate each project to other projects - both public and private, and Appalachian and non-Appalachian projects. Identify projects which relate to the objectives of the Appalachian Regional Development Act and which are eligible for Appalachia funding.

Pennsylvania State Planning Board

February 16, 1968

ACKNOWLEDGMENTS

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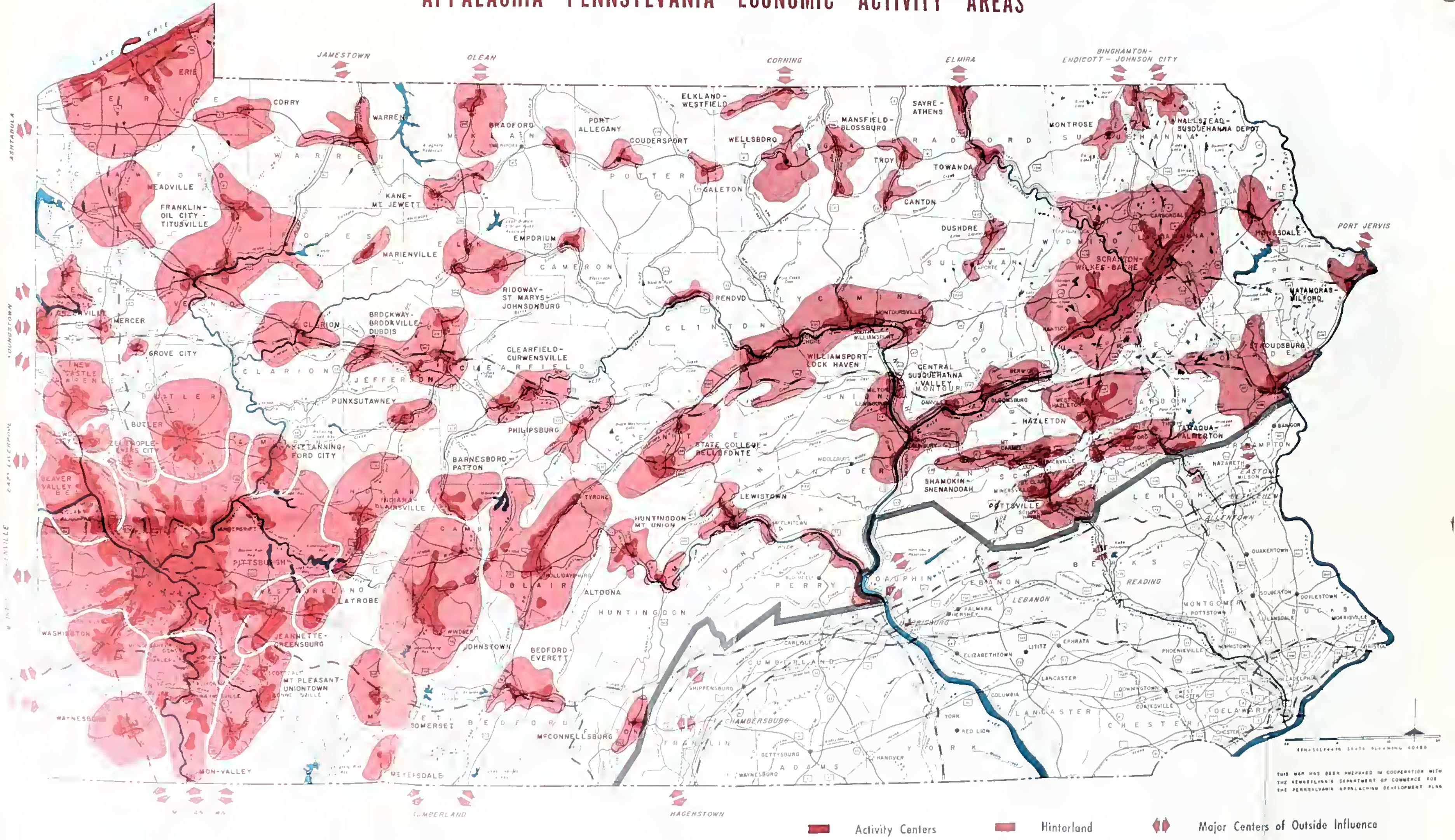
APPALACHIA PENNSYLVANIA ECONOMIC ACTIVITY AREAS



THIS MAP HAS BEEN PREPARED IN COOPERATION WITH THE PENNSYLVANIA DEPARTMENT OF COMMERCE FOR THE PENNSYLVANIA APPALACHIAN DEVELOPMENT PLAN

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